



*Technically Superior by Design*

2011



**RELOADER'S GUIDE**

Our Mission:  
PREMIUM PERFORMANCE, CONSISTENT QUALITY.

Every container of Alliant smokeless powder is backed by a century of manufacturing experience, and the most exacting quality control procedures in the industry. We check and control chemical composition, the shape and size of powder grains, even the propellants’ density and porosity. We send samples of every batch to our ballistics lab, testing, among other things, for burning speed. Then, after blending batches together for exactly the right ballistic characteristics, we use our advanced computerized equipment to test again.

**The result:** a line of products known and respected for consistent quality and performance— not only in the lab, but especially on the firing line. One of the reasons you’re a reloader, after all, is so you’ll know exactly what to expect every time you pull the trigger. With Alliant powders you will. Not only shell after shell, but also year after year.



Functional Wholesaler Approval List

| Wholesaler              | Location       | Phone #      |
|-------------------------|----------------|--------------|
| AcuSport                | Utah and Ohio  | 937-593-7010 |
| AmChar Inc              | New Hampshire  | 585-328-3951 |
| CAC                     | Pennsylvania   | 814-472-4430 |
| Camfour                 | Massachusetts  | 413-568-9663 |
| Continental             | Wisconsin      | 608-779-9820 |
| Dawson Enterprises      | Ohio           | 330-833-0014 |
| Denny’s Sporting Goods  | Ohio           | 330-534-3707 |
| Gene Sears Distributors | Oklahoma       | 405-262-2647 |
| Graf & Sons             | Missouri       | 800-531-2666 |
| Gunarama                | Washington     | 509-535-3040 |
| Hill Country Wholesale  | Texas          | 800-777-2666 |
| John Emmett             | Canada         | 905-227-3342 |
| L. M. Burney Inc        | Texas          | 800-737-3006 |
| Lawry Targets           | Canada         | 905-765-3342 |
| North East Distributors | New York       | 585-248-0953 |
| Pacific Flyway          | Utah           | 801-304-4365 |
| Parks & Son             | North Carolina | 800-992-6504 |
| Rileys’ Inc.            | Indiana        | 260-897-2351 |
| Schanz Shooters Supply  | Michigan       | 269-692-2897 |
| Sports South            | Louisiana      | 800-388-3845 |
| Sunset Distributors     | Iowa           | 641-847-2464 |
| Trainer Hale Supply     | Texas          | 830-420-4530 |
| W.A. Murphy             | California     | 626-444-9271 |
| Western Powder          | Montana        | 406-234-0422 |
| W.L. Baumler Co.        | Ohio           | 830-420-4530 |

**⚠ DANGER!**  
READ THE SAFETY SECTION (PAGES 4-15) OF THIS MANUAL PRIOR TO ENGAGING IN RELOADING.

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## SAAMI INFORMATION

SPORTING ARMS AND AMMUNITION MANUFACTURERS' INSTITUTE, INC.

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## SMOKELESS POWDER: PROPERTIES AND STORAGE

Ammunition handloading has become increasingly popular in recent years. This leaflet discusses properties of smokeless powder and offers recommendations for its storage.

This information is intended to increase the knowledge of all concerned individuals and groups regarding smokeless powder. The statements and recommendations made are not intended to supersede local, state or Federal regulations. Proper authorities should be consulted on regulations for storage and use of smokeless powder in each specific community. A second set of information entitled, "SPORTING AMMUNITION PRIMERS: PROPERTIES, HANDLING, & STORAGE FOR HANDLOADING" supplements this information on smokeless powder.

### PROPERTIES OF SMOKELESS POWDER

Smokeless powders, or propellants, are essentially mixtures of chemicals designed to burn under controlled conditions at the proper rate to propel a projectile from a gun.

Smokeless powders are made in three forms:

1. Thin, circular flakes or wafers
2. Small cylinders, both perforated and unperforated
3. Small spheres or flattened spheres

Single-base smokeless powders derive their main source of energy from nitrocellulose.

The energy released from double-base smokeless powders is derived from both nitrocellulose and nitroglycerin.

All smokeless powders are extremely flammable; by design, they are intended to burn rapidly and vigorously when ignited.

Oxygen from the air is not necessary for the combustion of smokeless powders since they contain sufficient built-in oxygen to burn completely, even in an enclosed space such as the chamber of a firearm.

Ignition occurs when the powder granules are heated above their ignition temperature. This can occur by exposing the powder to:

1. A flame such as a match or a primer flash.
2. An electrical spark or the sparks from welding, grinding, etc.
3. Heat from an electric hot plate or a fire directed against or near a closed container even if the powder itself is not exposed to the flame.

When smokeless powder burns, a great deal of gas at high temperature is formed. If the powder is confined, this gas will create pressure in the surrounding structure. The rate of gas generation is such, however, that the pressure can be kept at a low level if sufficient space is available or if the gas can escape.

In this respect smokeless powder differs from blasting agents or high explosives such as dynamite or blasting gelatin, although smokeless powder may contain chemical ingredients common to both of these products.

Smokeless powder does not detonate like high explosives as it has a controlled rate of burn and differs considerably in its burning characteristics from common "black powder." Black powder burns at essentially the same rate out in the open (unconfined) as when in a gun.

When ignited in an unconfined state, smokeless powder burns inefficiently with an orange-colored flame. It may produce a considerable amount of light brown noxious smelling smoke. It leaves a residue of ash and partially burned powder. The flame is hot enough to cause severe burns.

When it burns under pressure as in a cartridge fired in a gun, smokeless powder produces very little smoke, a small glow, and leaves very little or no residue. The burning rate of smokeless powder increases with increased pressure.

If burning smokeless powder is confined, gas pressure will rise and eventually can cause the container to burst. Under such circumstances, the bursting of a strong container creates effects similar to an explosion.

For this reason, the U.S. Department of Transportation (formerly Interstate Commerce Commission) sets requirements for shipping containers for propellants and requires tests of loaded containers under actual fire conditions before approving them for use.

When smokeless powder in DOT approved containers is ignited during such tests, the container seams split open or lids pop off to release gases and powder from confinement at low pressure.

Additional details are available in a SAAMI video "Smokeless Powder and the Fire Service."

### HOW TO CHECK SMOKELESS POWDER FOR DETERIORATION

Although modern smokeless powders contain stabilizers and are basically free from deterioration under proper storage conditions, safe practices require a recognition of the signs of deterioration and its possible effects.

Deteriorating smokeless powders produce an acidic odor and may produce a reddish brown fume. (Don't confuse this with common solvent odors such as alcohol, ether and acetone.) Powder deterioration can be checked by opening the cap on the container and smelling the contents. Powder undergoing deterioration has an irritating acidic odor.

Dispose of deteriorating smokeless powders immediately. Check to make certain that powder is not exposed to extreme heat as this may cause deterioration. Such exposure produces an acidity which accelerates further reaction and has been known, because of the heat generated by the reaction, to cause spontaneous combustion.

Never salvage powder from old cartridges and do not attempt to blend salvaged powder with new powder or attempt to blend two types of powder to make a "custom" blend. Don't accumulate old powder stocks.

Smokeless powder is intended to function by burning, so it must be protected against accidental exposure to flame, sparks or high temperatures.

For these reasons, storage enclosures should be made of insulating materials to protect the powder from external heat sources.

Once smokeless powder begins to burn, it will continue to burn (and generate gas pressure) until it is consumed.

DOT-approved containers are constructed to open up at low internal pressures to avoid the effects normally produced by the rupture or bursting of a strong container.

Storage enclosures for smokeless powder should be constructed in a similar manner:

1. Of fire-resistant and heat-insulating materials to protect contents from external heat.

2. Sufficiently large to vent the gaseous products of combustion satisfactorily which would result if the quantity of smokeless powder within the enclosure accidentally ignited.

If a small, tightly enclosed storage enclosure is loaded to capacity with containers of smokeless powder, the enclosure will expand or move outwards to release the gas pressure - if the powder in storage is accidentally ignited.

Under such conditions, the effects of the release of gas pressure are similar or identical to the effects produced by an explosion.

Therefore, storage of smokeless powder should be in strict compliance with all applicable regulations and recommendations of the National Fire Protection Association.

**RECOMMENDATIONS FOR STORAGE OF SMOKELESS POWDER**

**Store in a cool, dry place.** Be sure the storage area selected is free from any possible sources of excess heat and is isolated from open flame, furnaces, hot water heaters, etc. Do not store smokeless powder where it will be exposed to the sun's rays. Avoid storage in areas where mechanical or electrical equipment is in operation. Restrict from the storage areas heat or sparks which may result from improper, defective or overloaded electrical circuits.

**Do not store smokeless powder in the same area with solvents, flammable gases or highly combustible materials. Store only in department of transportation approved containers.**

**Do not transfer** the smokeless powder from an approved container into one which is not approved.

**Do not smoke** in areas where powder is stored or used. Place appropriate **“No Smoking”** signs in these areas.

**Do not subject the storage cabinets to close confinement.**

**Storage cabinets should be constructed of insulating materials and with a weak wall, seams or joints to provide an easy means of self-venting.**

**Do not keep old or salvaged powders.** Check old powders for deterioration regularly. Destroy deteriorated powders immediately.

**Obey all regulations regarding quantity and methods of storing.** Do not store all your smokeless powders in one place. If you can, maintain separate storage locations. Many small containers are safer than one large container.

**Keep your storage and use area clean.** Clean up spilled powder promptly. Make sure the surrounding area is free of trash or other readily combustible materials

**11-3 SMOKELESS PROPELLANTS**

**11-3.1** Quantities of smokeless propellants not exceeding 25 lb. (11.3kg), in shipping containers approved by the U.S. Department of Transportation, may be transported in a private vehicle.

**11-3.2** Quantities of smokeless propellants exceeding 25 lb. (11.3kg) but not exceeding 50 lb. (22.7 kg), transported in a private vehicle, shall be transported in a portable magazine having wood walls of at least 1-inc. (25.4-mm) nominal thickness.

**11-3.3** Transportation of more than 50 lb. (22.7 kg) of smokeless propellants in a private vehicle is prohibited.

**11-3.4** Commercial shipments of smokeless propellants in quantities not exceeding 100 lb. (45.4kg) may be reclassified for transportation purposes as flammable solids (Division 4.1) when packaged according to U.S. Department of Transportation Hazardous Materials Regulation( (Title 49, Code of Federal Regulations, Part 173.171), and shall be transported accordingly.

**11-3.5** Commercial shipments of smokeless propellants exceeding 100 lb. (45.4 kg) or not packaged in accordance with the regulations cited in 11-3.4 shall be transported according to the U. S. Department of Transportation regulations for Division 1.3C propellant explosives.

**11-3.6** Smokeless propellants shall be stored in shipping containers approved by U.S. Department of Transportation.

**11-3.7** Smokeless propellants intended for personal use in quantities not exceeding 20 lb. (9.1 kg) shall be permitted to be stored in original containers in residences. Quantities exceeding 20 lb. (9.1 kg), but not exceeding 50 lb. (22.7 kg), shall be permitted to be stored in residences where kept in a wooden box or cabinet having walls of at least 1-in. (25.4-mm) nominal thickness.

**11-3.8** Not more than 20 lb. (9.1 kg) of smokeless propellants, in containers of 1 lb. (0.45 kg) maximum capacity, shall be displayed in commercial establishments.

**11-3.9** Commercial stocks of smokeless propellants should be stored as follows:

(a) Quantities exceeding 20 lb. (9.1 kg), but not exceeding 100 lb. (45.4 kg) shall be stored in portable wooden boxes having walls of at least 1 in. (25.4 mm) thickness.

(b) Quantities exceeding 100 lb. (45.4 kg), but not exceeding 800 lb. (363 kg), shall be stored in non-portable storage cabinets having walls of at least 1 in. (25.4 mm) thickness. Not more than 400 lb. (181 kg) shall be permitted to be stored in any one cabinet and cabinets shall be separated by a distance of at least 25 ft (7.63 m) or by a fire partition having a fire resistance of at least 1 hour.

(c) Quantities exceeding 800 lb. (363 kg), but not exceeding 5,000 lb. (2268 kg), shall be permitted to be stored in a building, provided the following requirements are met:

1. The warehouse or storage room shall not be accessible to unauthorized personnel.
2. Smokeless propellant shall be stored in non-portable storage cabinets having wood walls at least 1 in. (25.4 mm) thickness and having shelves with no more than 3 ft (0.92 m) of separation between shelves.
3. No more than 400 lb. (181 kg) shall be stored in any one cabinet.
4. Cabinets shall be located against the walls of the storage room or warehouse with at least 40 ft (12.2 m) between cabinets.
5. The separation between cabinets may be reduced to 20 ft (6.1m) where barricades twice the height of the cabinets are attached to the wall, mid-way between each cabinet. The barricades shall extend at least 10 ft (3m) outward, shall be firmly attached to the wall, and shall be constructed of ¼ in. (6.4-mm) boiler plate, 2 in (51-mm) thick wood, brick, or concrete block.
6. Smokeless propellant shall be separated from materials classified by the US Department of Transportation as flammable liquids, flammable solids, and oxidizing materials by a distance of 25 ft (7.63mm) or by a fire partition having a fire resistance of at least 1 hour.
7. The building shall be protected by an automatic sprinkler system installed in accordance with NFPA 13, Standard for the Installation of Sprinkler Systems.

(d) Smokeless propellants not stored according to 11.39 (a), (b) and (c) above shall be stored in a Type 4 magazine constructed and located in accordance with Chapter 6.

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## ⚠ **DANGER!**

Millions of men and women reload ammunition as a hobby, or because the cost savings allow them to enjoy shooting more often. You should always reload so that the safest and most accurate loads on the shooting line will be yours, and always remember that to become or to continue to be a safe reloader, ***you must be careful at all times.*** As a reloader, you are dealing with and manufacturing explosive materials; handling powders and primers that can, if misused, explode or burn, causing property damage, serious personal injury--even death! Later, when you shoot the ammunition you've produced and checked, you will be the person closest to the gun, the one most likely to be injured if improperly loaded ammunition causes your gun to malfunction.

***Protect yourself by studying books that describe safe reloading techniques in detail. When using smokeless powders, use only the exact type and quantity described herein. Always store and use your smokeless powders in accordance with the guidelines listed in this booklet.***

## ⚠ **POWDER WARNINGS!**

- ***NEVER*** substitute smokeless powder for black powder, or for black powder substitutes.
- ***NEVER*** mix together any two powders, regardless of type, brand, style, or source.
- ***NEVER*** use the data in this *Reloaders' Guide* for any other powders, even if advertised "similar to Bullseye" or "burns the same as Red Dot," etc.

***Violation of any of the above could result in severe personal injury (including death) or gun damage.***

## ⚠ **WARNING! — BE SURE TO:**

- **The powder charge weights listed in our data tables are maximum.** For rifle and pistol loads, the maximum powder charge should be reduced by 10% to establish a minimum or starting powder charge.
- All loads have been tested in our ballistics lab with SAAMI approved, un-vented test barrels. Keep in mind that such test equipment often yields higher velocities than are usually obtained with sporting arms.
- If ever you are unsure of your load data, or if you detect any signs of high pressure while using load data from this Guide, stop loading or testing at once. Contact our technical service personnel at 800-276-9337 before proceeding.
- Instructions for proper handling, storage and disposal are given on pages 4-7 (SAAMI instructions).

## **BALLISTICS**

The ballistic data shown in this booklet were obtained in the laboratory under strictly controlled conditions. ***You must load only the exact combinations that are listed.*** Even then, different reloading techniques, plus industrial tolerances of each component, likely will cause your ammunition, or ammunition loaded by other competent laboratories, to yield slightly different ballistic data. Therefore, ***powder charge recommendations in this booklet must never be exceeded.*** Safe shooters and hunters know that accuracy, not maximum power, is their key to success.

## **FOR TECHNICAL ASSISTANCE**

For Technical Assistance or for any information not included in this *Reloaders' Guide*, please call 1-800-276-9337.

For our interactive Reloaders' Guide on the Web, click onto [www.alliantpowder.com](http://www.alliantpowder.com).  
Our e-mail address is: [alliant.reload@atk.com](mailto:alliant.reload@atk.com)

## **DISCLAIMER**

Alliant disclaims any warranties with respect to this product, the safety or suitability thereof, or the results obtained, whether express or implied, including, without limitation, any implied warranty of merchantability or fitness for a particular purpose and/or any other warranty. Buyers and users assume all risk, responsibility, and liability whatsoever for any and all injuries (including death), losses, or damages to persons or property arising from the use of this product, whether or not occasioned by seller's negligence or based on strict product liability or principles of indemnity or contribution. Alliant neither assumes nor authorizes any person to assume for it any liability in connection with the use of this product.

## ⚠ **DANGER!**

## **HANDLOADING PRECAUTIONS & TECHNICAL DATA**

### **Pistol and Revolver Cartridges Special Reloading Precautions**

Most pistols and revolvers function best when loaded with a quick-burning powder such as Bullseye. Since peak pressure is reached very quickly, the seating depth of the bullet is very important: the deeper the bullet, the higher the pressure. If the bullet is seated too deeply, dangerous pressures will be generated, which could burst the gun and cause severe personal injury (including death).

Equally critical is the powder charge. Guard against multiple charges when reloading. Certain cartridges (notably .38 Special) have been reloaded accidentally with double and even triple charges, with catastrophic results when fired in the gun.

#### **A. Prevent deeply seated bullets.**

1. Your assembled cartridges must be as long as, or longer than, the minimum length listed for the combination you are reloading.
2. Set your bullet station accordingly and lock tool securely.
3. Keep bullet station clean of accumulating lead and grease.
4. Inspect all loaded rounds for overall length.
5. Be sure every bullet is held tightly by shell mouth, especially pistol loads (recoil drives magazine against bullet noses of contained cartridges).

#### **B. Prevent multiple charges.**

1. **Handloading:** Keep track of every powder charge, then look inside all shells and compare powder levels.
2. **Progressive reloading:** Be sure every shell is truly empty; don't back up the turret; don't jiggle the handle; don't use a shell to clean out the powder train (use a paper cup or equivalent).

#### **C. Inspection.**

1. Discard cases with split mouths.
2. Discard cases with enlarged primer pockets.
3. Do not use cases that are designed for primer-propelled practice cartridges; such cases may not be designed for full power loads.

Physical Effect of Gun Recoil (Kick)

The rearward motion of every gun, its recoil, increases when heavier shot or heavier bullets are fired, and when higher velocity loads are fired. This motion must be opposed by the shoulder, or the pistol hand, of the shooter. Whenever the recoil is perceptibly annoying to the shooter, accuracy on succeeding firings undoubtedly diminishes.

When the shooting condition demands heavy loads and high velocity, recoil kick can be reduced by using a heavier gun, and by spreading the force over a larger area of the anatomy, such as by using a wider stock, larger grip, plus shoulder pad or softer grip.

Excellent publications available to the reloader, plus his or her own growing sophistication, have generated a wholesome trend away from maximum loads and toward accuracy of loads no more powerful than needed for the intended purpose. Reducing recoil increases accuracy.

Contributing to increased accuracy as well as the pleasantness of shooting is in two main areas:

- 1. This *Reloaders’ Guide* includes many reduced loads.
- 2. Our research indicates that the burning rate of powders has a modest effect on recoil. For example, whenever two or more powders are listed for the same load, the slower one usually is chosen by the expert shooter as giving milder felt recoil. An intriguing aspect of reloading at home is the freedom to assemble, for example, trap loads with Red Dot or Green Dot powder, then to shoot them alternately to decide which seems more comfortable.

DANGER! Handloading Precautions

- 1. **Understand what you are doing and why.** Read handbooks and manuals on reloading. Talk to experienced reloaders. Write or call suppliers of components if you have questions or are in doubt.
- 2. Stay *alert* when reloading. **Do not reload when distracted.**
- 3. Establish a loading procedure and follow it. **Do not vary your sequence of operations.**
- 4. **Examine empty cases** (shotshell or metallic) to be sure they are in good condition before reloading. Never force live cartridges into or out of the chamber of a gun.
- 5. **Do not use cases that are designed for primer-propelled practice cartridges;** such cases may not be designed for full power loads.
- 6. **Do not ream out or enlarge flash holes of metallic cartridge cases.** This may change the ignition rate and result in dangerous pressures.
- 7. **Do not punch out live primers.** Fire the empty primed shells in a gun.
- 8. **Do not mix primers.** Primers differ in brisance of ignition, which affects pressure and velocity. Use only the primer listed.
- 9. **The shotshell loading data in the *Reloaders’ Guide* are for LEAD SHOT only. Use steel shot only as specified in the steel shot data section (pgs. 18-20).**
- 10. One-piece plastic wads for shotshells vary in compressibility and gas-sealing effectiveness. Use only the wad listed.
- 11. If you “throw,” or measure powder charges by volume, check-weigh the charge frequently. Do not mix powders.
- 12. **Do not use powders near a flame, spark-producing machinery, or heating device.** Do not expose powders to temperatures above 100°F.
- 13. Keep out of reach of children.
- 14. **Do not smoke while reloading.**

Smokeless Powders for Reloading

We currently offer 27 powders for use in reloading. These are listed in the order of decreasing burning rates. Each powder listed is “slower” than those preceding it and “faster” than those following it. Among these Alliant smokeless powders, for example, Red Dot® burns more slowly than Bullseye®, but faster than Green Dot®.

| Powder             | Principal Use¹   | Can Also be Used In¹   |
|--------------------|--|--|
| Bullseye®          | Handgun Loads  | .45 ACP Target   |
| Extra-Lite™        | 7/8 ounce 12-Gauge Target Loads                                  | 1 ounce 12-Gauge Target Loads  |
| e3®                | 12-Gauge Target Loads  | Light Target Loads   |
| Red Dot®           | Light and Standard Shotshell Loads, 12-Gauge                     | Handgun Loads  |
| Promo®             | Light and Standard Shotshell Loads, 12-Gauge                     | Handgun Loads  |
| Clay Dot®          | 12-Gauge Target Loads  | Light Target Loads   |
| American Select®   | 12-Gauge Target Loads  | Handgun Loads  |
| Green Dot®         | Standard and Medium Shotshell Loads, 12- and 16-Gauge            | Handgun Loads  |
| 20/28®             | 28-Gauge Target Loads  | 20-Gauge Target Loads  |
| Unique®            | All-Around Shotshell Powder, 12-, 16-, 20-, and 28-Gauge         | Handgun Loads  |
| Power Pistol®      | High performance pistol loads such as the 9mm, .40 S&W, and 10mm | Moderate pressure pistol cartridges like the .38 Special, .380 Auto, and .45 ACP |
| Herco®             | Heavy Shotshell Loads, 10-, 12-, 16-, 20-, and 28-Gauge          | Heavy Handgun Loads  |
| Blue Dot®          | Magnum Shotshell Loads, 10-, 12-, 16-, 20-, and 28-Gauge         | Magnum Handgun Loads   |
| Pro Reach®         | Long Range Target  | Hunting Loads  |
| Steel®             | Steel Shotshell, 10- and 12-Gauge                                | Magnum, Shotshell and Turkey Loads   |
| 410®               | 410 Bore Target Loads  |  |
| 2400®              | Magnum Handgun Loads   | Some Rifle and Shotshell Loads   |
| Power Pro® 300-MP  | Magnum Handgun Loads   |  |
| Reloder® 7         | Light Rifle Loads  | Silhouette Loads   |
| Reloder 10X®       | Light Varmint/Light Bullet Loads                                 | Bench rest calibers; Light Bullet 308  |
| Power Pro® Varmint | Standard Varmint   | Medium Rifle Loads   |
| Power Pro® 2000-MR | Heavy 308  |  |
| Reloder® 15        | Medium Rifle Loads   | Silhouette Loads   |
| Reloder® 17        | Short Magnum Loads   | Medium Rifle Loads   |
| Reloder® 19        | Large Rifle Loads  | Target and hunting rifle loads   |
| Reloder® 22        | Magnum Rifle Loads   | Maximum hunting loads  |
| Power Pro® 4000-MR | Heavy 308  |  |
| Reloder® 25        | Large Magnum Rifle Loads   | Maximum hunting loads  |
| Reloder® 50        | 50-caliber Target  |  |

¹Use only in the loads printed in this Guide.

Packaging

| Powder   | 1-lb Canister | 4-lb Canister | 5-lb Canister | 8-lb Keg |
|--|---------------|---------------|---------------|----------|
| Bullseye, Red Dot, American Select, Green Dot, Unique, Herco, 2400, e3, 410, 20/28 | X             | X             |               | X        |
| Power Pistol   | X             | X             |               |          |
| Pro Reach, Extra-Lite  | X             |               |               | X        |
| Power Pro Series   | X             |               |               | X        |
| Blue Dot   | X             |               | X             |          |
| Reloder Series   | X             |               | X             |          |
| Steel  | X             | X             |               |          |
| Promo, Clay Dot  |               |               |               | X        |

All 27 powders are always in stock at distributors’ magazines throughout the U.S.A., and in most countries where All 27 powders are always in stock at distributors’ magazines throughout the U.S.A., and in most countries where reloading is legally permitted and popular. Any reloader unable to purchase any of the 27 powders at retail stores that handle powders should write to the address on the back cover. We cannot ship directly, but we will endeavor to correct supply shortages in your area.



**Powder Information**

Smokeless sporting propellants are of two basic types – single-base and double-base. Single-base propellants derive their energy from nitrocellulose and double-base from a combination of nitrocellulose and nitroglycerin. Alliant propellants range from the “near” single-base American Select (2% nitroglycerin) to the high nitroglycerin (40%) double-base Bullseye. In addition, our propellants contain stabilizers for long storage life and various other ballistic modifiers which reduce flash, improve combustion efficiency, and promote clean burning.

Some of our propellants also have a chemical coating on the surface to control the burning rate. This creates a progressive burn for achieving higher velocities at lower pressures. All of our propellants have a graphite glaze, which ensures smooth, consistent metering of charges through volumetric reloaders.

Alliant propellants are extruded and cut into circular flakes or cylinders by precision dies and cutting equipment. Granule size tolerances are very tight and uniform to prevent separation of different size granules and to ensure consistent ballistic performance, load after load.

By utilizing a precise combination of chemical formulation, granule size, and chemical coatings, we are able to tailor the burning characteristics of our propellants to achieve the best overall performance in a wide range of loads.

Because each of our propellants is specifically engineered to have different burn rates and performance characteristics, **NEVER BLEND OR MIX DIFFERENT POWDERS, AND USE ONLY THE POWDER AND QUANTITY RECOMMENDED IN THIS RELOADER’S GUIDE.**

All powders burn with great precision and rapidity inside the gun chamber, generating the hot, high-pressure gas that accelerates the bullet (or shot) and drives it toward the target. **It is critically important for safety that the powder used is matched to the bullet (or shot) weight and other factors; otherwise, the gun parts may be deformed or may even burst and cause serious personal injury (including death).** Shot-to-shot accuracy can also be degraded by deviations from recommended loads. Even after 80 years of producing and testing powders, ballisticians are unable to calculate and predict **exact** ballistic results; we must test-fire our powders with each set of components and record the results. Therefore, **the ballistic values and recommended combinations listed in this booklet must be followed without deviation.**

**Working up charges.** For shotgun loads, use the charge weight shown. However, for all rifle and pistol loads, first load and fire a few cartridges at the starting charge weight, watching for any sign of excessive pressure (difficult extraction, flattened or blown primers, unusual recoil).

**Handgun loads.** Many pistol and revolver loads require only small amounts of fast-burning powders; therefore: (1) guard against accidental double charges, and even multiple charges, whether loading with handtools or with progressive loading devices; (2) be sure that each bullet is positioned in the case so that the minimum overall length is not violated.

**Dram Equivalent**

Prior to the commercialization of smokeless powder, shotgun shells were loaded with black powder. The weight measurement system used for black powder was “drams.” Compared with black powder, **smokeless powder is more dense and much more energetic, so it cannot safely be measured and used like black powder.** Indeed, a different weight system was selected for smokeless powder: “grains,” wherein 7,000 grains equal one pound.

Since many shooters still wanted to be able to compare their smokeless powder loads with the original black powder loads, the term “dram equivalent” evolved. Simply stated, the dram equivalent is an indicator of the velocity of a particular shot load. **But note that the charge and weight of smokeless powder must not be calculated from the dram equivalent.**

**Notice**

We have inserted information on the properties and storage of smokeless powder for your understanding, so that you can avoid unnecessary risks when using it. This information, on pages 4-7, was published initially by the Sporting Arms and Ammunition Manufacturers’ Institute, Inc., several years ago in the interest of safety. You must read these pages carefully and comply with the precautions listed. If you have questions, please call or write to us at the address on the back cover.

**Important Safety and Health Precautions**

**⚠ DANGER! SMOKELESS GUNPOWDER - EXTREMELY FLAMMABLE KEEP AWAY FROM SPARKS OR HEAT SOURCE FAILURE TO FOLLOW THESE WARNINGS COULD RESULT IN INJURY OR DEATH.**

- 1. DO NOT smoke when reloading.**
- 2. DO NOT use spark-producing tools.**
- 3. DO NOT mix powders of different kinds.**
- 4. DO NOT leave powder where children can get it.**
- 5. DO NOT try to load when distracted.**
- 6. AVOID AN OPEN FIRE OR WORKING NEAR SPARK-PRODUCING MACHINERY OR ANY HEAT SOURCE.**
- 7. Pour out only the amount of powder needed for immediate work.**
- 8. Check the powder measure each time it is used. Make sure the settings have not been accidentally changed. Check-weigh “thrown charges” frequently.**
- 9. Clean up any spilled powders. Use a brush and dustpan; do not use a vacuum cleaner. Dispose of spilled powder as described in the SAAMI pages of this Guide.**
- 10. Store powder only in its original container, which was carefully designed for this usage. DO NOT REPACKAGE. Do not purchase or accept any Alliant powder not in its original, FACTORY-SEALED container.**
- 11. Be sure the powder container is completely empty before discarding. Do not use the container to store other powders or materials, or for any other purpose.**
- 12. Always keep in mind that SMOKELESS POWDER IS AN EXPLOSIVE MATERIAL AND HIGHLY FLAMMABLE. It should always be stored and handled in such a way as to avoid impact, friction, heat, sparks, or flame.**
- 13. Wear safety glasses when reloading.**
- 14. ⚠ DANGER! THIS MATERIAL CONTAINS NITROGLYCERIN.** Inhalation, skin contact, or ingestion may cause severe headache, nausea, and lowering of blood pressure. **THEREFORE, THE FOLLOWING PRECAUTIONS MUST BE OBSERVED WHEN HANDLING POWDERS:**
  - A. Do not take internally. In case of ingestion, cause vomiting. Call a physician.**
  - B. Avoid contamination of food, beverages, or smoking materials.**
  - C. Avoid breathing dust. Ensure adequate ventilation during handling.**
  - D. Wash thoroughly after handling and before eating, drinking, or smoking.**
  - E. Do not carry powder in clothing.**

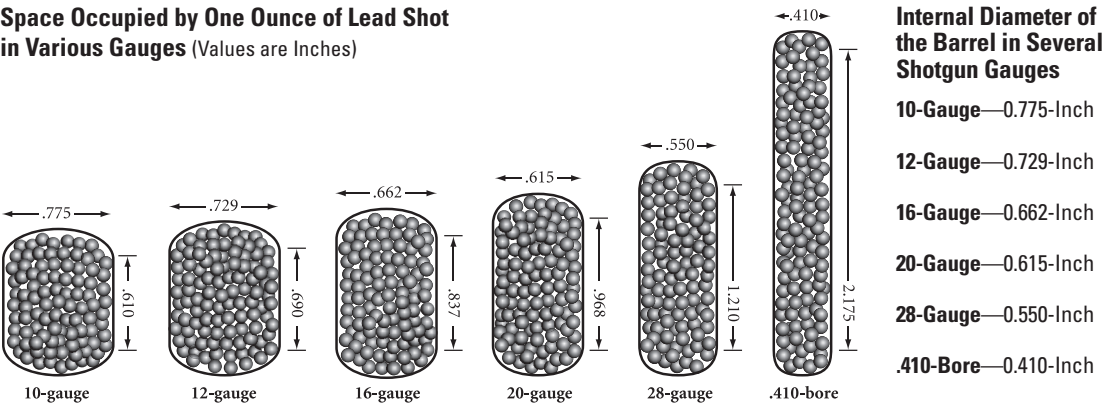
**You must also always remember:**

- 1. Establish a routine for reloading.** It will result in more uniform loads and less chance of error.
- 2. Some primers are more powerful than others (they produce more gas at a higher temperature). Use only the primers specified herein.**
- 3. Shotgun shells differ in their sealing ability. Use only the load combinations specified herein.**
- 4. If you use cast bullets, their diameter, hardness, lubrication, and crimp will affect the ballistics.**
- 5. The shotgun loads in this booklet are for use with LEAD SHOT ONLY! For steel shot see special steel section, pages 18-20.**
- 6. Use only the brands of powder and components shown in our tables. Do not substitute other types.**
- 7. Discharging firearms in poorly ventilated areas, cleaning firearms, or handling ammunition may result in exposure to lead, a substance known to cause birth defects, reproductive harm, and other serious physical injury. Have adequate ventilation at all times. Wash hands and face thoroughly after handling and before coming in contact with food, chewing materials, and smoking material.**

Reference Tables

| Approximate Number of Pellets in Specific Weights of Lead Shot (Sizes 2 Through 9) |       |       |       |       |           |       |           |       |
|--|-------|-------|-------|-------|-----------|-------|-----------|-------|
| Weight, oz   | No. 2 | No. 4 | No. 5 | No. 6 | No. 7 1/2 | No. 8 | No. 8 1/2 | No. 9 |
| 1/2  | 45    | 67    | 85    | 112   | 175       | 205   | 242       | 292   |
| 3/4  | 67    | 101   | 127   | 168   | 262       | 308   | 363       | 439   |
| 7/8  | 79    | 118   | 149   | 197   | 306       | 359   | 425       | 512   |
| 1  | 90    | 135   | 170   | 225   | 350       | 410   | 485       | 585   |
| 1 1/8  | 101   | 152   | 191   | 253   | 393       | 461   | 545       | 658   |
| 1 1/4  | 112   | 169   | 213   | 281   | 437       | 513   | 605       | 731   |
| 1 3/8  | 124   | 186   | 234   | 309   | 481       | 564   | 665       | 804   |
| 1 1/2  | 135   | 202   | 255   | 337   | 525       | 615   | 730       | 877   |

Space Occupied by One Ounce of Lead Shot in Various Gauges (Values are Inches)



| Number of Shells That Can Be Loaded with One Pound of Powder at Various Grains Per Load<br>(The term grain is a measure of weight: 7,000 grains equal one pound) |              |              |              |              |              |              |              |              |              |              |              |
|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Grains/ Load   | Loads/ Pound | Grains/ Load | Loads/ Pound | Grains/ Load | Loads/ Pound | Grains/ Load | Loads/ Pound | Grains/ Load | Loads/ Pound | Grains/ Load | Loads/ Pound |
| 12   | 583          | 23           | 304          | 34           | 205          | 45           | 156          | 56           | 125          | 67           | 104          |
| 13   | 538          | 24           | 291          | 35           | 200          | 46           | 152          | 57           | 123          | 68           | 103          |
| 14   | 500          | 25           | 280          | 36           | 194          | 47           | 149          | 58           | 121          | 69           | 101          |
| 15   | 466          | 26           | 269          | 37           | 189          | 48           | 146          | 59           | 119          | 70           | 100          |
| 16   | 437          | 27           | 259          | 38           | 184          | 49           | 143          | 60           | 117          | 71           | 99           |
| 17   | 411          | 28           | 250          | 39           | 179          | 50           | 140          | 61           | 115          | 72           | 97           |
| 18   | 388          | 29           | 241          | 40           | 175          | 51           | 137          | 62           | 113          | 73           | 96           |
| 19   | 368          | 30           | 233          | 41           | 170          | 52           | 135          | 63           | 111          | 74           | 95           |
| 20   | 350          | 31           | 225          | 42           | 166          | 53           | 132          | 64           | 109          | 75           | 93           |
| 21   | 333          | 32           | 218          | 43           | 162          | 54           | 130          | 65           | 108          | 76           | 92           |
| 22   | 318          | 33           | 212          | 44           | 159          | 55           | 127          | 66           | 106          | 77           | 91           |

Typical Percentage of Pellets in a 30-Inch Circle at 40 Yards (Pattern) for Various Choke Sizes (Choke is a Constriction at the Muzzle of a Shotgun Barrel)

|                                   |                       |                   |
|-----------------------------------|-----------------------|-------------------|
| Full Choke—70%                    | Modified Choke—55%    | True Cylinder—40% |
| Improved Modified Choke—65 to 70% | Improved Cylinder—50% |                   |

Ballistic Data

The velocity and pressure obtained with the specific combinations of shell, wad, primer, bullet or shot weight, powder, and powder weight provided in this booklet were obtained in a laboratory, where considerable effort is made to control the load and test conditions. Velocity was measured with a chronograph (electric stopwatch). Pressure was measured either by compressing copper cylinders (C.U.P.), or electronically, by use of a piezoelectric transducer (P.S.I.).

**Guns are designed to take a considerable amount of internal pressure, but if this is exceeded, they burst violently. Be alert to signs of excess pressure, such as heavy recoil, flattened primers, or blown primers. Don't make changes in the suggested loads.**

Tone variations (shaded areas) used in the reloading tables are for ease of reading and do not represent preferred loads.

**The quantity of powder to use is listed in grains, which are a measure of weight, under each powder column.**

Every reloader needs a good-quality scale for weighing each powder charge, or for checking the weight of powder thrown by volumetric loaders.

Special Notes Regarding Components Other Than Powder

- A. Shotgun Shells.** Manufacturers may sell ammunition under different brand names that are identical for reloading purposes. Following are popular variations. When in doubt, consult the ammunition producer.
- **Federal Game Load Plastic** same as **Duck, Pheasant, Field, Dove and Top Gun®**.
  - **Federal Premium** (Integral Base Wad)
  - **Remington-Peters.** Same as Mohawk brand shells.
  - **Remington-STS Type.** Same as Premier, Nitro 27, GunClub, and Game Loads
  - **Winchester AA-Type.** Old and new style hulls are interchangeable.
  - **Winchester Polyformed Type (Reifenhauser Tube)** same as **Duck and Pheasant, Dove and Squirrel.**

B. Primers

- **CCI 109** and **CCI 209** are ballistically identical and can be interchanged.
- **CCI 209M** (Magnum) is “hotter” and cannot be substituted for CCI 109 or 209. Use 209M only as listed.
- **Rem. 209** is “hotter” and cannot be substituted for Rem. 97 or Rem. 209P primer.
- **Rem. 209P** is interchangeable with Rem. 97 primer.
- **Federal 209A** is “hotter” and cannot be substituted for Federal 209.

**C. Wads.** Card wads and fiber wads are used for certain slug and buckshot loads and a few light shotshell loads. Do not interchange wads.

**D. Shot. Use only clean lead shot. DO NOT USE STEEL SHOT IN SHOTSHELL LOADS EXCEPT AS LISTED IN STEEL™ SECTION.**

**E. Shot Buffers.** Do not add any buffers or fillers of any kind to shotshell loads listed in this Guide.

**F. Cards and Fillers.** For revolver, pistol, and rifle cartridge reloading, do not add any cards, kapok, or fillers of any kind to loads listed in this Guide.

**⚠ WARNING! BLACK POWDER**

**BLACK POWDER IS ENTIRELY DIFFERENT FROM SMOKELESS POWDER. NEVER SUBSTITUTE ONE FOR THE OTHER. SMOKELESS POWDERS HAVE MUCH MORE ENERGY THAN BLACK POWDER. NEVER ATTEMPT TO USE SMOKELESS POWDER IN BLACK POWDER GUNS OR SALUTING CANNON; THEY MAY BLOW UP AND CAUSE SERIOUS PERSONAL INJURY (INCLUDING DEATH).**



POWDER BUSHING CHARTS

A reloading scale is *required* to check the nominal weight of a powder charge.

Powder bushings can vary in the charge weight they drop and could vary as much as several grains under certain conditions.

Powder density, moisture content, and loading technique can cause a variation from the bushing weights listed on the charts. Also, the loading machine vibration affects charge weights. A complete loading cycle should be completed to assure an average powder charge weight.

The information in these tables has been supplied by the reloading machine manufacturers or Alliant Powder and *is not a reloading recommendation*.

| Lee Load-All Capacity Bushing Chart (Units shown in grains) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|---|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Bushing #   | .095 | .100 | .105 | .110 | .116 | .122 | .128 | .134 | .141 | .148 | .155 | .163 | .171 | .180 | .189 |
| Red Dot   | 11.0 | 11.6 | 12.2 | 12.8 | 13.5 | 14.2 | 14.8 | 15.5 | 16.4 | 17.2 | 18.0 | 18.9 | 19.8 | 20.9 | 21.9 |
| Amer-Select   | 11.6 | 12.2 | 12.8 | 13.4 | 14.2 | 14.9 | 15.6 | 16.4 | 17.2 | 18.1 | 18.9 | 19.9 | 20.9 | 22.0 | 23.1 |
| Green Dot   | 12.3 | 13.0 | 13.6 | 14.3 | 15.1 | 15.8 | 16.6 | 17.4 | 18.3 | 19.2 | 20.1 | 21.2 | 22.2 | 23.4 | 24.5 |
| Blue Dot  | 18.0 | 19.0 | 19.9 | 20.8 | 22.0 | 23.1 | 24.3 | 25.4 | 26.7 | 28.0 | 29.4 | 30.9 | 32.4 | 34.1 | 35.8 |
| Unique  | 14.3 | 15.0 | 15.8 | 16.5 | 17.4 | 18.3 | 19.2 | 20.1 | 21.2 | 22.2 | 23.3 | 24.5 | 25.7 | 27.0 | 28.4 |
| Herco   | 13.9 | 14.6 | 15.3 | 16.1 | 16.9 | 17.8 | 18.7 | 19.6 | 20.6 | 21.6 | 22.6 | 23.8 | 25.0 | 26.3 | 27.6 |
| 2400  | 21.0 | 22.1 | 23.2 | 24.3 | 25.6 | 27.0 | 28.3 | 29.6 | 31.2 | 32.7 | 34.3 | 36.0 | 37.8 | 39.8 | 41.8 |

Note: Only available with Lee Load-Fast.

| Hornady Powder Bushing Chart for 366 Auto and Apex 91 (Units shown in grains) |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|---|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Grains  | 10 | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  | 22  | 23  | 24  | 25  |
| Red Dot   |    |     | 384 | 393 | 405 | 423 | 438 | 453 | 468 | 480 | 489 | 498 | 510 | 519 |     |     |
| Amer-Select   |    |     |     |     |     | 417 | 423 | 432 | 447 | 456 | 468 | 477 | 483 |     |     |     |
| Green Dot   |    |     | 363 | 378 | 390 | 405 | 420 | 435 | 447 | 456 | 468 | 480 | 492 | 501 | 513 | 522 |
| Unique  |    |     |     | 342 | 354 | 369 | 381 | 393 | 405 | 414 | 423 | 435 | 444 | 453 | 465 | 474 |
| Herco   |    |     |     | 357 | 369 | 381 | 393 | 405 | 414 | 426 | 438 | 450 | 462 | 471 | 477 | 489 |
| Blue Dot  |    |     |     |     |     |     |     | 366 | 372 | 381 | 390 | 396 | 408 | 414 | 423 | 435 |
| 2400  |    | 256 | 266 | —   | 291 | 300 | 312 | 324 | 330 | 339 |     |     |     |     |     |     |
| Clay Dot  |    |     |     |     | 432 | 453 | 468 | 489 | 510 |     |     |     |     |     |     |     |

| Hornady Powder Bushing Chart for 366 Auto and Apex 91 continued (Units shown in grains) |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Grains  | 28  | 29  | 30  | 31  | 32  | 33  | 34  | 35  | 36  | 37  | 38  | 39  | 40  | 41  | 42  |
| Red Dot   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Amer-Select   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Green Dot   | 549 | 558 |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Unique  | 501 | —   | 510 |     |     |     |     |     |     |     |     |     |     |     |     |
| Herco   | 513 | 552 | 531 | —   | 549 | 558 | 564 | 573 | —   | 588 | 594 |     |     |     |     |
| Blue Dot  | 447 | 459 | 468 | 474 | 483 | 489 | 495 | 501 | 510 | 516 | 522 | 531 | 534 | 543 | 549 |
| 2400  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |

| Ponsness/Warren Powder Bushing Chart (Units shown in grains) |    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|--|----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Bushing #  | 1A | 2A   | 3A   | A    | B    | C    | C1   | D    | D1   | E    | E1   | E2   | F    | F1   | F2   | G    |
| Bullseye   |    |      |      |      |      |      |      |      |      | 16.2 | 16.8 | 17.7 | 18.7 | 19.4 |      |      |
| Red Dot  |    |      |      |      |      |      |      |      |      |      | 11.6 | 12.2 | 12.9 | 13.4 | 13.7 | 14.5 |
| Amer-Select  |    |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 16.4 |
| Green Dot  |    |      |      |      |      |      |      |      |      |      | 11.7 | 12.3 | 13.1 | 13.6 | 13.8 | 14.7 |
| Unique   |    |      |      |      |      |      |      |      | 12.6 | 14.2 | 14.8 | 15.6 | 16.5 | 17.2 | 17.5 | 18.7 |
| Herco  |    |      |      |      |      |      |      |      | 12.3 | 13.8 | 14.4 | 15.1 | 16.0 | 16.6 | 16.9 | 18.0 |
| Blue Dot   |    |      |      |      |      |      |      |      | 16.4 | 18.4 | 19.2 | 20.1 | 21.3 | 22.2 | 22.6 | 23.9 |
| 2400   |    | 12.3 | 13.2 | 15.2 | 16.1 | 16.8 | 17.6 | 18.3 | 19.0 | 21.3 | 22.2 | 23.3 | 24.7 | 25.7 | 26.1 | 27.7 |

| Ponsness/Warren Powder Bushing Chart continued (Units shown in grains) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |    |
|--|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----|
| Bushing #  | H    | I    | J    | J1   | K    | L    | M    | N    | O    | P    | Q    | R    | S    | T    | U    | V    | W    | X    | Y    | Z    | AA |
| Red Dot  | 15.7 | 16.5 | 16.8 | 17.3 | 17.6 | 18.5 | 19.4 | 20.7 | 20.9 | 21.3 | 21.9 | 22.9 |      |      |      |      |      |      |      |      |    |
| Amer-Select  | 17.5 | 18.2 | 18.8 | 19.4 | 19.9 | 20.6 | 22.0 |      |      |      |      |      |      |      |      |      |      |      |      |      |    |
| Green Dot  | 15.9 | 16.7 | 17.0 | 17.5 | 17.9 | 18.8 | 19.6 | 21.1 | 21.3 | 21.8 | 22.3 | 23.2 | 23.6 | 25.3 | 26.5 |      |      |      |      |      |    |
| Unique   | 20.2 | 21.2 | 21.7 | 22.3 | 22.7 | 24.0 | 25.0 | 26.8 | 27.1 | 27.6 |      |      |      |      |      |      |      |      |      |      |    |
| Herco  | 19.5 | 20.5 | 20.9 | 21.5 | 21.9 | 23.0 | 24.0 | 25.7 | 26.0 | 26.5 | 27.1 | 28.1 | 28.8 | 30.7 | 32.1 | 33.1 | 34.9 | 35.4 | 37.2 |      |    |
| Blue Dot   | 25.9 | 27.2 | 27.7 | 28.5 | 29.1 | 30.6 | 31.9 | 34.2 | 34.5 | 35.2 | 36.0 | 37.5 | 38.1 | 40.7 | 42.5 | 43.8 | 46.5 | 47.2 | 49.5 | 55.7 |    |
| 2400   | 30.0 | 31.5 | 32.2 | 33.1 | 33.7 | 35.5 | 37.1 | 39.8 | 40.2 | 41.1 | 42.0 | 43.8 | 44.5 | 47.5 | 49.8 |      |      |      |      |      |    |

| MEC Powder Bushing Chart (Units Shown In Grains) |   |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |  |
|--|---|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--|--|
| Bushing #  | 9 | 10   | 11   | 12   | 12a  | 13   | 13a  | 14   | 15   | 16   | 17   | 18   | 19   | 20   | 21   | 22   | 23   | 24   | 25   | 26   | 27   | 28   | 29   | 30   |      |  |  |
| Clay Dot   |   |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |  |
| Red Dot  |   | 6.3  | 6.7  | 7.1  | 7.5  | 7.9  | 8.3  | 8.7  | 9.2  | 9.6  | 10.1 | 10.6 | 11.1 | 11.6 | 12.1 | 12.6 | 13.1 | 13.7 | 14.2 | 14.9 | 15.7 | 16.4 | 17.1 | 17.8 |      |  |  |
| e3   |   | 6.6  | 7.0  | 7.2  | 7.5  | 8.0  | 8.3  | 8.9  | 9.2  | 9.9  | 10.5 | 11.0 | 11.7 | 12.3 | 12.8 | 13.4 | 13.8 | 14.2 | 14.8 | 15.3 | 15.9 | 16.4 | 16.9 | 17.4 |      |  |  |
| Amer-Select                                      |   | 6.9  | 7.3  | 7.7  | 8.2  | 8.6  | 9.1  | 9.6  | 10.1 | 10.6 | 11.1 | 11.7 | 12.2 | 12.8 | 13.3 | 13.9 | 14.5 | 15.1 | 15.7 | 16.4 | 17.0 | 17.7 | 18.3 | 19.0 |      |  |  |
| Green Dot  |   | 6.7  | 7.2  | 7.6  | 8.0  | 8.4  | 8.9  | 9.3  | 9.8  | 10.3 | 10.8 | 11.3 | 11.8 | 12.4 | 12.9 | 13.5 | 14.0 | 14.6 | 15.2 | 15.8 | 16.4 | 17.0 | 17.7 | 18.3 |      |  |  |
| 20/28  |   |      |      |      |      | 11.3 | 11.9 | 12.5 | 13.0 | 13.8 | 14.5 | 15.1 | 15.7 | 16.3 | 17.1 | 18.0 | 18.8 |      |      |      |      |      |      |      |      |  |  |
| Unique   |   | 7.5  | 7.9  | 8.4  | 8.9  | 9.4  | 9.9  | 10.4 | 10.9 | 11.4 | 12.0 | 12.6 | 13.1 | 13.7 | 14.5 | 15.1 | 15.8 | 16.4 | 17.1 | 17.7 | 18.4 | 19.1 | 19.8 | 20.5 |      |  |  |
| Herco  |   | 7.9  | 8.3  | 8.8  | 9.3  | 9.8  | 10.4 | 10.9 | 11.4 | 12.0 | 12.6 | 13.2 | 13.8 | 14.4 | 15.0 | 15.7 | 16.3 | 17.0 | 17.7 | 18.4 | 19.1 | 19.8 | 20.6 | 21.3 |      |  |  |
| Blue Dot   |   | 10.8 | 11.3 | 11.9 | 12.5 | 13.1 | 13.7 | 14.4 | 15.0 | 15.7 | 16.3 | 17.0 | 17.7 | 18.4 | 19.2 | 20.1 | 21.0 | 21.9 | 22.8 | 23.7 | 24.6 | 25.5 | 26.4 | 27.3 |      |  |  |
| 2400   |   | 11.8 | 12.5 | 13.3 | 14.0 | 14.8 | 15.6 | 16.4 | 17.2 | 18.1 | 18.9 | 19.8 | 20.7 | 21.7 | 22.6 | 23.6 | 24.6 | 25.6 | 26.6 | 27.7 | 28.8 | 29.9 | 31   | 32.1 |      |  |  |
| 410  |   | 11.1 | 11.7 | 12.1 | 13.0 | 13.6 | 14.5 | 15.1 | 15.7 | 16.6 | 17.4 | 18.4 | 19.2 | 20.2 | 21.1 | 22.1 | 23.1 | 24.4 | 25.6 | 26.1 | 26.9 | 28.0 | 29.5 | 30.3 | 31.4 |  |  |

| MEC Powder Bushing Chart continued (Units Shown In Grains) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |  |  |
|--|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--|--|--|
| Bushing #  | 31   | 32   | 33   | 34   | 35   | 36   | 37   | 38   | 38a  | 39   | 39a  | 40   | 40a  | 41   | 41a  | 42   | 42a  | 43   | 43a  | 44   | 44a  | 45   | 45a  | 46   |  |  |  |
| Clay Dot   | 16.9 | 17.4 | 18.1 | 18.8 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |  |  |
| Red Dot  | 18.5 | 19.2 | 19.9 | 20.6 | 21.3 | 21.9 | 22.7 | 23.3 | 24.1 | 24.7 | 25.2 | 25.9 | 26.6 | 27.3 | 27.9 | 28.4 | 29.3 | 29.9 | 30.8 | 31.5 | 32.1 | 32.7 | 33.4 | 34.1 |  |  |  |
| e3   | 17.9 | 18.5 | 19.5 | 20.5 | 21.0 | 21.8 | 22.3 | 22.8 | 23.2 | 23.8 | 24.5 | 25.4 | 26.0 | 26.6 | 27.0 | 27.5 | 28.8 | 30.0 | 31.1 | 32.2 | 33.1 | 33.9 | 34.8 | 35.9 |  |  |  |
| Amer-Select  | 19.7 | 20.4 | 21.1 | 21.8 | 22.6 | 23.3 | 24.1 | 24.9 | 25.7 | 26.5 | 27.3 | 28.1 | 28.9 | 29.8 | 30.7 | 31.5 | 32.4 | 33.3 | 34.2 | 35.2 | 36.4 | 37.0 | 38.0 | 39.0 |  |  |  |
| Green Dot  | 19.0 | 19.6 | 20.3 | 21.0 | 21.7 | 22.4 | 23.2 | 23.9 | 24.7 | 25.4 | 26.2 | 27.0 | 27.8 | 28.6 | 29.4 | 30.3 | 31.1 | 32.0 | 32.8 | 33.7 | 34.6 | 35.3 | 36.4 | 37.4 |  |  |  |
| Unique   | 21.1 | 21.7 | 22.5 | 23.2 | 24.0 | 24.8 | 25.6 | 26.5 | 27.3 | 28.2 | 29.0 | 29.9 | 30.8 | 31.7 | 32.6 | 33.5 | 34.5 | 35.4 | 36.4 | 37.4 | 38.4 | 39.4 | 40.4 | 41.4 |  |  |  |
| Herco  | 22.1 | 22.9 | 23.7 | 24.5 | 25.3 | 26.2 | 27.0 | 27.9 | 28.8 | 29.7 | 30.6 | 31.5 | 32.4 | 33.4 | 34.3 | 35.3 | 36.3 | 37.3 | 38.3 | 39.5 | 40.4 | 41.4 | 42.5 | 43.6 |  |  |  |
| Blue Dot   | 28.2 | 29.1 | 30.5 | 31.6 | 32.7 | 33.8 | 35.0 | 36.1 | 37.3 | 38.5 | 39.7 | 40.9 | 42.2 | 43.4 | 44.7 | 46.0 | 47.4 | 48.7 | 50.1 | 51.5 | 52.9 | 54.3 | 55.7 | 57.2 |  |  |  |
| 2400   | 33.3 | 34.5 | 35.7 | 36.9 | 38.1 | 39.4 | 40.7 | 42.0 | 43.3 | 44.6 | 46.0 | 47.4 | 48.8 | 50.2 | 51.6 | 53.1 | 54.6 | 56.1 | 57.6 | 59.2 | 60.7 | 62.3 | 63.9 | 65.6 |  |  |  |
| 410  | 32.4 | 33.6 | 34.7 | 35.9 | 37.0 | 38.1 | 39.3 | 40.6 | 42.0 | 43.3 | 45.0 | 46.7 | 48.0 | 49.2 | 50.4 | 51.7 | 53.0 | 54.8 | 56.3 | 57.4 | 58.0 | 59.2 | 60.4 | 62.0 |  |  |  |

# SHOTSHELL RELOADING DATA

## NON-TOXIC SHOTSHELL RELOADING

**⚠️ WARNING!** Reloading steel shotshells requires strict adherence to Alliant published reloading specifications. The reloading specifications provided in this publication were derived through the use of controlled laboratory conditions. While reloading steel shotshells, the reloader must adhere precisely to all the components without exception, set forth in the load data and specifications. Alliant recommends that both powder charge and shot charge be individually weighed to insure compliance to load data. Steel shotshells should only be used in well maintained firearms that are designed to shoot steel shot loads. Alliant recommends that the commercially available shotshell sealant be applied to both the primer and crimp areas to prevent moisture penetration.

### REGARDING THE USE OF FILLERS/SPACERS:

Spacer or filler wads serve the purpose of raising the shot column to a level that will allow for the forming of a good crimp. If a filler is required for a particular load, the thickness and location of that filler will be indicated in the “spacer” column. As an example, it might be described in the following manner: 1/8 U, 1/8 O, which means that the two 1/8 inch thick spacers are required; one should be placed in the bottom of the wad cup directly under the shot, and a second one over the shot. Spacers can be stacked if necessary, and the number needed may vary depending on the size of the shot being used. If your crimp dishes in a bit, or bulges, you can add or reduce the number of spacers to improve the crimp. Only slight adjustments, if any, will be necessary for this reason. We do not recommend the use of shot buffer in any of our loads.

| NON-TOXIC SHOTSHELL RELOADING DATA          |                              |          |       |                             |          |        |         |
|---|------------------------------|----------|-------|-----------------------------|----------|--------|---------|
| STEEL® POWDER FOR RELOADING STEEL SHOT ONLY |                              |          |       | 10-GAUGE, 3 1/2 INCH SHELLS |          |        |         |
| Shell Type                                  | Wad                          | Primer   | Shot  | Velocity                    | Pressure | Powder | Spacers |
|   |                              |          | (oz)  | (fps)                       | (psi)    | (grs)  |         |
| Rem (yellow base wad)                       | Precision Reloading TUPRW105 | Fed 209A | 1 1/4 | 1590                        | 9800     | 50.0   | 1/2 U   |
| Rem (yellow base wad)                       | Ballistics Products #3221000 | Fed 209A | 1 5/8 | 1310                        | 10100    | 37.0   | none    |
| Rem Plastic SP                              | Precision Reloading TUPRW105 | Fed 209A | 1 3/8 | 1475                        | 10000    | 43.5   | 3/8 U   |
| Rem Plastic SP                              | Ballistics Products #3221000 | Fed 209A | 1 3/8 | 1535                        | 10100    | 46.0   | 3/8 U   |
| Rem Plastic SP                              | Rel Spec “SAM 1 10 ga 3 1/2” | Fed 209A | 1 3/8 | 1555                        | 10300    | 48.0   | 1/4 U   |
| Rem Plastic SP                              | Precision Reloading TUPRW105 | Fed 209A | 1 1/2 | 1345                        | 10300    | 37.5   | 1/4 U   |
| Rem Plastic SP                              | Ballistics Products #3221000 | Fed 209A | 1 1/2 | 1385                        | 10100    | 39.0   | 1/4 U   |
| Rem Plastic SP                              | Rel Spec “SAM 1 10 ga 3 1/2” | Fed 209A | 1 1/2 | 1470                        | 10100    | 45.0   | 1/8 U   |
| Win Polyformed                              | Rel Spec “SAM 1 10 ga 3 1/2” | Fed 209A | 1 3/8 | 1538                        | 10200    | 45.5   | 1/4 U   |
| Win Polyformed                              | Rel Spec “SAM 1 10 ga 3 1/2” | Fed 209A | 1 1/2 | 1415                        | 9900     | 41.0   | 1/8 U   |
| STEEL® POWDER FOR RELOADING STEEL SHOT ONLY |                              |          |       | 12-GAUGE, 2 3/4 INCH SHELLS |          |        |         |
| Fed Gold Medal                              | Rel Spec “SAM 1 12 ga 2 3/4” | Fed 209A | 7/8   | 1700                        | 7800     | 42.0   | 1/8 U   |
| Fed Gold Medal                              | Ballistic Products #3221275  | Fed 209A | 7/8   | 1765                        | 9000     | 45.0   | none    |
| Fed Gold Medal                              | Ballistic Products #3221275  | Fed 209A | 1     | 1480                        | 9500     | 33.0   | 1/8 U   |
| Fed Gold Medal                              | Precision Reloading TUPRW12  | Fed 209A | 1     | 1500                        | 8000     | 37.0   | 1/8 U   |
| Fed Gold Medal                              | Rel Spec “SAM 1 12 ga 2 3/4” | Fed 209A | 1     | 1520                        | 9200     | 36.0   | none    |
| Fed Gold Medal                              | Rel Spec “SAM 1 12 ga 2 3/4” | Fed 209A | 1 1/8 | 1380                        | 9000     | 32.0   | none    |
| Fed Gold Medal                              | Precision Reloading TUPRW12  | Fed 209A | 1 1/8 | 1425                        | 9600     | 32.0   | none    |
| Rem Nitro Mag                               | Precision Reloading TUPRW12  | Fed 209A | 1     | 1520                        | 10800    | 35.5   | none    |
| Rem Nitro Mag                               | Rel Spec “SAM 1 12 ga 2 3/4” | Fed 209A | 1     | 1546                        | 10300    | 35.5   | none    |
| Rem Nitro Mag                               | Precision Reloading TUPRW12  | Fed 209A | 1 1/8 | 1361                        | 10400    | 29.5   | none    |
| Rem Nitro Mag                               | Rel Spec “SAM 1 12 ga 2 3/4” | Fed 209A | 1 1/8 | 1428                        | 10400    | 32.5   | none    |
| Fed 0.090 Intergral BW                      | Precision Reloading TUPRW123 | Fed 209A | 1     | 1660                        | 9400     | 44.0   | 1/4 U   |

## Non-Toxic Shotshell Reloading Data continued

| STEEL® POWDER FOR RELOADING STEEL SHOT ONLY |                                |          | 12-GAUGE, 3 INCH SHELLS     |          |          |        |         |
|---|--------------------------------|----------|-----------------------------|----------|----------|--------|---------|
| Shell Type                                  | Wad                            | Primer   | Shot                        | Velocity | Pressure | Powder | Spacers |
|   |                                |          | (oz)                        | (fps)    | (psi)    | (grs)  |         |
| Fed 0.090 Intergral BW                      | Ballistic Products #3221230    | Fed 209A | 1                           | 1690     | 10500    | 45.0   | 3 /8 U  |
| Fed 0.090 Intergral BW                      | Reloading Specialties 12 ga 3" | Fed 209A | 1                           | 1720     | 8900     | 47.0   | 3 /8 U  |
| Fed 0.090 Intergral BW                      | Ballistic Products #3221230    | Fed 209A | 1 1/8                       | 1510     | 10400    | 37.0   | 1/4 U   |
| Fed 0.090 Intergral BW                      | Precision Reloading TUPRW123   | Fed 209A | 1 1/8                       | 1515     | 10900    | 38.0   | 1/4 U   |
| Fed 0.090 Intergral BW                      | Reloading Specialties 12 ga 3" | Fed 209A | 1 1/8                       | 1580     | 10700    | 40.5   | 1/8 U   |
| Fed 0.090 Intergral BW                      | Precision Reloading TUPRW123   | Fed 209A | 1 1/4                       | 1355     | 10500    | 33.0   | 1/8 U   |
| Fed 0.090 Intergral BW                      | Ballistic Products #3221230    | Fed 209A | 1 1/4                       | 1370     | 10500    | 33.0   | 1/8 U   |
| Fed 0.090 Intergral BW                      | Reloading Specialties 12 ga 3" | Fed 209A | 1 1/4                       | 1435     | 10800    | 37.0   | 1/8 U   |
| Fed Game Load 7/16 BW                       | Ballistic Products #3221230    | Fed 209A | 1                           | 1665     | 8900     | 45.0   | 1/4 U   |
| Fed Game Load 7/16 BW                       | Reloading Specialties 12 ga 3" | Fed 209A | 1                           | 1700     | 8200     | 48.0   | 1/4 U   |
| Fed Game Load 7/16 BW                       | Ballistic Products #3221230    | Fed 209A | 1 1/8                       | 1550     | 10600    | 39.5   | 1/4 U   |
| Fed Game Load 7/16 BW                       | Reloading Specialties 12 ga 3" | Fed 209A | 1 1/8                       | 1560     | 10500    | 40.5   | 1/8 U   |
| Fed Game Load 7/16 BW                       | Ballistic Products #3221230    | Fed 209A | 1 1/4                       | 1390     | 10900    | 33.0   | 1/4 U   |
| Fed Game Load 7/16 BW                       | Reloading Specialties 12 ga 3" | Fed 209A | 1 1/4                       | 1430     | 10500    | 36.0   | none    |
| Rem Nitro Steel                             | Ballistic Products #3221230    | Fed 209A | 1 1/8                       | 1440     | 10800    | 33.5   | 1/4 U   |
| Rem Nitro Steel                             | Precision Reloading TUPRW123   | Fed 209A | 1 1/8                       | 1457     | 10700    | 35.0   | 1/4 U   |
| Rem Nitro Steel                             | Reloading Specialties 12 ga 3" | Fed 209A | 1 1/8                       | 1479     | 10600    | 33.0   | 1/4 U   |
| Rem Nitro Steel                             | Precision Reloading TUPRW123   | Fed 209A | 1 1/4                       | 1392     | 10700    | 32.0   | 1/8 U   |
| STEEL® POWDER FOR RELOADING STEEL SHOT ONLY |                                |          | 12-GAUGE, 3 1/2 INCH SHELLS |          |          |        |         |
| Fed Intergral BW                            | Reloading Specialties “Sam 1”  | Fed 209A | 1 1/4                       | 1510     | 10400    | 45.0   | 3/8 U   |
| Fed Intergral BW                            | Ballistic Products mm 12312    | Fed 209A | 1 1/4                       | 1560     | 10900    | 45.0   | 1/8 U   |
| Fed Intergral BW                            | Precision Reloading TUPRW1235  | Fed 209A | 1 1/4                       | 1565     | 10700    | 45.0   | 1/2 U   |
| Fed Intergral BW                            | Precision Reloading TUPRW1235  | Fed 209A | 1 3/8                       | 1470     | 12500    | 40.0   | 3/8 U   |
| Fed Intergral BW                            | Ballistic Products mm 12312    | Fed 209A | 1 3/8                       | 1485     | 12600    | 41.5   | 3/8 U   |
| Fed Intergral BW                            | Precision Reloading TUPRW1235  | Fed 209A | 1 1/2                       | 1360     | 12600    | 36.0   | 3/8 U   |
| Fed Intergral BW                            | Ballistic Products mm 12312    | Fed 209A | 1 1/2                       | 1385     | 12800    | 37.0   | 1/4 U   |
| Fed Intergral BW                            | Reloading Specialties “Sam 1”  | Fed 209A | 1 1/2                       | 1390     | 13300    | 39.0   | 1/4 U   |
| Rem Plastic SP                              | Reloading Specialties “Sam 1”  | Fed 209A | 1 1/4                       | 1595     | 13100    | 45.0   | 3/8 U   |
| Rem Plastic SP                              | Ballistic Products mm 12312    | Fed 209A | 1 1/4                       | 1615     | 13300    | 45.0   | 3/8 U   |
| Rem Plastic SP                              | Ballistic Products mm 12312    | Fed 209A | 1 3/8                       | 1430     | 12800    | 37.0   | 1/4 U   |
| Rem Plastic SP                              | Reloading Specialties “Sam 1”  | Fed 209A | 1 3/8                       | 1430     | 12800    | 38.5   | 3/8 U   |
| Rem Plastic SP                              | Ballistic Products mm 12312    | Fed 209A | 1 1/2                       | 1305     | 13000    | 33.0   | 1/4 U   |
| Rem Plastic SP                              | Reloading Specialties “Sam 1”  | Fed 209A | 1 1/2                       | 1330     | 13000    | 35.0   | 1/4 U   |



Non-Toxic Shotgun Reloading Data continued

| BLUE DOT® POWDER FOR RELOADING BISMUTH SHOT ONLY 12-GAUGE, 2 3/4 INCH SHELLS |                          |          |       |          |          |        |              |
|--|--------------------------|----------|-------|----------|----------|--------|--------------|
| Shell Type   | Wad                      | Primer   | Shot  | Velocity | Pressure | Powder | Spacers      |
|  |                          |          | (oz)  | (fps)    | (psi)    | (grs)  |              |
| Rem Premier STS  | CB 1138-12               | Fed 209A | 1 1/4 | 1421     | 10100    | 39.5   | None         |
| BLUE DOT® POWDER FOR RELOADING BISMUTH SHOT ONLY 12-GAUGE, 3 INCH SHELLS     |                          |          |       |          |          |        |              |
| Fed 0.090 Intergral BW   | Rem SP 12                | Fed 209A | 1 3/8 | 1507     | 10700    | 46.0   | 1/8 O        |
| Fed 0.090 Intergral BW   | Fed 12S4                 | Fed 209A | 1 1/2 | 1310     | 10100    | 38.0   | None         |
| Fed 0.090 Intergral BW   | Rem RP 12                | Fed 209A | 1 1/2 | 1359     | 10800    | 40.0   | 1/4 O        |
| Fed 7/16 Paper BW  | Rem SP 12                | Fed 209A | 1 3/8 | 1464     | 10700    | 43.5   | 1/4 O        |
| Fed 7/16 Paper BW  | Rem RP 12                | Fed 209A | 1 1/2 | 1347     | 10400    | 39.0   | 1/8 O        |
| Rem SPELV Yellow BW  | Rem RP 12                | Fed 209A | 1 3/8 | 1473     | 10700    | 44.0   | 1/8 O        |
| Rem SPELV Yellow BW  | Rem SP 12                | Fed 209A | 1 3/8 | 1564     | 10700    | 50.0   | None         |
| Rem SPELV Yellow BW  | Rem RP 12                | Fed 209A | 1 1/2 | 1441     | 10700    | 45.0   | None         |
| STEEL® POWDER FOR RELOADING HEVI SHOT SHOT ONLY 12-GAUGE, 2 3/4 INCH SHELLS  |                          |          |       |          |          |        |              |
| Fed 7/16 Paper BW  | Prec Rel TUPRWIZ (white) | Fed 209A | 1 3/8 | 1320     | 10600    | 33.5   | 1/8 O, 1/4 U |
| Rem SPELV Yellow BW  | Prec Rel TUPRWIZ (white) | Fed 209A | 1 1/4 | 1367     | 10900    | 32.2   | 1/4 O, 1/4 U |
| Rem SPELV Yellow BW  | Prec Rel TUPRWIZ (white) | Fed 209A | 1 3/8 | 1291     | 10400    | 31.3   | 1/8 O, 1/4 U |
| STEEL® POWDER FOR RELOADING HEVI SHOT SHOT ONLY 12-GAUGE, 3 INCH SHELLS      |                          |          |       |          |          |        |              |
| Fed 0.090 Intergral BW   | Prec Rel TUPR23 (Orange) | Fed 209A | 1 3/8 | 1372     | 10300    | 40.0   | 3/8 U        |
| Fed 0.090 Intergral BW   | Prec Rel TUPR23 (Orange) | Fed 209A | 1 1/2 | 1294     | 10900    | 34.0   | 3/8 U        |
| Fed 7/16 Paper BW  | Prec Rel TUPR23 (Orange) | Fed 209A | 1 3/8 | 1371     | 10600    | 36.5   | 3/8 U        |
| Fed 7/16 Paper BW  | Prec Rel TUPR23 (Orange) | Fed 209A | 1 1/2 | 1274     | 10500    | 33.0   | 1/4 U        |
| Rem SPELV Yellow BW  | Prec Rel TUPR23 (Orange) | Fed 209A | 1 1/4 | 1462     | 10300    | 40.0   | 3/8 U        |
| Rem SPELV Yellow BW  | Prec Rel TUPR23 (Orange) | Fed 209A | 1 3/8 | 1385     | 10900    | 37.5   | 3/8 U        |
| Rem SPELV Yellow BW  | Prec Rel TUPR23 (Orange) | Fed 209A | 1 1/2 | 1259     | 10900    | 33.0   | 1/4 U        |

| INTERNATIONAL LOADS                               |          |                     |          |          |       |                  |       |
|---|----------|---------------------|----------|----------|-------|------------------|-------|
| 24 GRAM INTERNATIONAL TARGET LOADS                |          |                     |          |          |       |                  |       |
| 12 Gauge, 2 3/4 inch Federal® Gold Medal® Plastic |          |                     |          |          |       |                  |       |
| Shot Weight                                       | Velocity | Wad                 | Primer   | Red Dot® |       | American Select® |       |
| (gram)  | (fps)    |                     |          | (grs)    | (psi) | (grs)            | (psi) |
| 24  | 1345     | CB 1100-12          | Fed 209A | 20.0     | 8700  | 21.0             | 8000  |
| 24  | 1345     | Fed 12SO            | Fed 209A | 20.0     | 8900  | 20.5             | 7900  |
| 24  | 1345     | Purple PC           | Fed 209A | 19.5     | 8700  |                  |       |
| 24  | 1345     | Rem TGT 12 & DRRT12 | Fed 209A | 20.5     | 8900  | 21.0             | 8100  |
| 24  | 1345     | WAA12L (Gray)       | Fed 209A | 20.0     | 9000  | 21.5             | 8100  |

24 Gram International Target Load Data continued

| 12 Gauge, 2 3/4 inch Fiocchi Plastic                |          |                      |          |          |       |                  |       |
|---|----------|----------------------|----------|----------|-------|------------------|-------|
| Shot Weight   | Velocity | Wad                  | Primer   | Red Dot® |       | American Select® |       |
| (gram)  | (fps)    |                      |          | (grs)    | (psi) | (grs)            | (psi) |
| 24  | 1345     | Fed 12SO             | Fio 616  | 20.5     | 8700  | 22.0             | 7800  |
| 24  | 1345     | Purple PC            | Fio 616  |          |       | 22.5             | 6900  |
| 24  | 1345     | Rem TGT 12 & DRRT12  | Fio 616  | 20.5     | 8200  | 22.0             | 7600  |
| 24  | 1345     | WAA12L (Gray)        | Fio 616  | 21.0     | 8500  | 22.0             | 7500  |
| 12 Gauge, 2 3/4 inch Remington Premier, STS Plastic |          |                      |          |          |       |                  |       |
| 24  | 1345     | CB 1100-12           | Rem 209P | 20.5     | 8800  | 20.5             | 8700  |
| 24  | 1345     | Fed 12SO             | Rem 209P | 20.0     | 9800  | 20.5             | 9600  |
| 24  | 1345     | Purple PC            | Rem 209P | 20.5     | 8300  | 21.0             | 8100  |
| 24  | 1345     | Rem TGT 12 & DRRT12  | Rem 209P | 20.5     | 9200  | 20.5             | 8500  |
| 24  | 1345     | WAA12L (Gray)        | Rem 209P | 20.5     | 9800  | 20.5             | 8700  |
| 12 Gauge, 2 3/4 inch Winchester Plastic             |          |                      |          |          |       |                  |       |
| 24  | 1345     | CB 1100-12           | Win 209  | 20.0     | 9600  | 20.5             | 8700  |
| 24  | 1345     | Fed 12SO             | Win 209  | 20.0     | 10100 | 20.5             | 9100  |
| 24  | 1345     | Purple PC            | Win 209  | 20.0     | 9000  | 21.0             | 8100  |
| 24  | 1345     | Rem TGT 12 & DRRT12  | Win 209  | 20.0     | 9600  | 20.5             | 8600  |
| 24  | 1345     | WAA12L (Gray)        | Win 209  | 20.0     | 10200 | 20.5             | 9700  |
| 28 GRAM INTERNATIONAL TARGET LOADS                  |          |                      |          |          |       |                  |       |
| 12 Gauge, 2 3/4 inch Federal® Gold Medal® Plastic   |          |                      |          |          |       |                  |       |
| Shot Weight   | Velocity | Wad                  | Primer   | Red Dot® |       | Green Dot®       |       |
| (gram)  | (fps)    |                      |          | (grs)    | (psi) | (grs)            | (psi) |
| 28  | 1345     | Fed 12SO             | Fed 209A | 23.0     | 9900  | 24.5             | 9100  |
| 28  | 1345     | Purple PC            | Fed 209A | 23.0     | 8800  | 25.0             | 8200  |
| 28  | 1345     | Rem Figure 8 & DRRF8 | Fed 209A | 22.5     | 9500  | 25.0             | 8400  |
| 28  | 1345     | WAA12SL              | Fed 209A | 22.5     | 9600  | 24.5             | 8400  |
| 12 Gauge, 2 3/4 inch Fiocchi Plastic                |          |                      |          |          |       |                  |       |
| 28  | 1345     | Fed 12S3 & DRF3      | Fio 616  | 22.0     | 9600  | 24.0             | 8800  |
| 28  | 1345     | Purple PC            | Fio 616  | 22.5     | 9500  | 24.0             | 8800  |
| 28  | 1345     | Rem Figure 8 & DRRF8 | Fio 616  | 21.5     | 9700  | 24.0             | 8800  |
| 28  | 1345     | WAA12SL              | Fio 616  | 21.5     | 10400 | 24.0             | 8800  |
| 12 Gauge, 2 3/4 inch Remington Premier, STS         |          |                      |          |          |       |                  |       |
| 28  | 1345     | Fed 12S3 & DRF3      | Rem 209P |          |       | 23.0             | 10300 |
| 28  | 1345     | Purple PC            | Rem 209P | 21.5     | 10600 | 24.0             | 9900  |
| 28  | 1345     | Rem Figure 8 & DRRF8 | Rem 209P | 21.5     | 10600 | 23.0             | 9700  |
| 28  | 1345     | WAA12SL              | Rem 209P |          |       | 23.0             | 10100 |

28 Gram International Target Load Data continued

| 12 Gauge, 2 3/4 inch Winchester Plastic |          |                      |         |             |             |       |
|---|----------|----------------------|---------|-------------|-------------|-------|
| Shot Weight                             | Velocity | Wad                  | Primer  | Red Dot®    | Green Dot®  |       |
| (gram)                                  | (fps)    |                      |         | (grs) (psi) | (grs) (psi) |       |
| 28                                      | 1345     | Purple PC            | Win 209 |             | 23.0        | 9500  |
| 28                                      | 1345     | Rem Figure 8 & DRRF8 | Win 209 |             | 22.5        | 10600 |

| 10 GAUGE RELOADING DATA  |           |          |           |           |  |       |       |
|--|-----------|----------|-----------|-----------|--|-------|-------|
| 10 Gauge, 3 1/2 inch Federal® Plastic with Paper Base Wad        |           |          |           |           |  |       |       |
| Shot   | Powder    | Primer   | Wad       | Spacers   | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |       |       |
| (oz)   |           |          |           |           | (grains)   | (fps) | (psi) |
| 1 1/4  | Green Dot | CCI 209M | Rem SP 10 | (6) 0.135 | 29.5   | 1265  | 8300  |
| 1 1/4  | Green Dot | Win 209  | Rem SP 10 | (6) 0.135 | 29.0   | 1265  | 8800  |
| 1 5/8  | Herco     | CCI 209M | Rem SP 10 | (4) 0.135 | 36.0   | 1285  | 10300 |
| 1 5/8  | Blue Dot  | CCI 209M | Rem SP 10 | (4) 0.135 | 45.0   | 1285  | 8000  |
| 1 5/8  | Blue Dot  | Win 209  | Rem SP 10 | (4) 0.135 | 45.5   | 1285  | 8300  |
| 1 7/8  | Blue Dot  | CCI 209M | Rem SP 10 | (3) 0.135 | 45.5   | 1270  | 9900  |
| 1 7/8  | Blue Dot  | Win 209  | Rem SP 10 | (3) 0.135 | 45.5   | 1270  | 10200 |
| 2  | Blue Dot  | CCI 209M | Rem SP 10 | (2) 0.135 | 43.5   | 1210  | 9200  |
| 2  | Blue Dot  | Win 209  | Rem SP 10 | (2) 0.135 | 44.0   | 1210  | 9400  |
| 2 1/4  | Blue Dot  | CCI 209M | Rem SP 10 | (1) 0.135 | 42.0   | 1165  | 9800  |
| 2 1/4  | Blue Dot  | Win 209  | Rem SP 10 | (1) 0.135 | 42.5   | 1165  | 10200 |
| 10 Gauge, 3 1/2 inch Remington SP                                |           |          |           |           |  |       |       |
| 1 1/4  | Green Dot | CCI 209M | Rem SP 10 | (6) 0.135 | 28.5   | 1265  | 8800  |
| 1 1/4  | Green Dot | Win 209  | Rem SP 10 | (6) 0.135 | 29.0   | 1265  | 8800  |
| 1 1/4  | Unique    | CCI 209M | Rem SP 10 | (6) 0.135 | 31.0   | 1265  | 7500  |
| 1 1/4  | Unique    | Win 209  | Rem SP 10 | (6) 0.135 | 31.0   | 1265  | 7600  |
| 1 5/8  | Blue Dot  | CCI 209M | Rem SP 10 | (4) 0.135 | 43.5   | 1285  | 8500  |
| 1 5/8  | Blue Dot  | Win 209  | Rem SP 10 | (4) 0.135 | 44.0   | 1285  | 8500  |
| 1 7/8  | Blue Dot  | CCI 209M | Rem SP 10 | (3) 0.135 | 44.0   | 1270  | 9800  |
| 1 7/8  | Blue Dot  | Win 209  | Rem SP 10 | (3) 0.135 | 44.5   | 1270  | 9100  |
| 2  | Blue Dot  | CCI 209M | Rem SP 10 | (2) 0.135 | 42.0   | 1210  | 10400 |
| 2  | Blue Dot  | Win 209  | Rem SP 10 | (2) 0.135 | 42.5   | 1210  | 10100 |
| 2 1/4  | Blue Dot  | CCI 209M | Rem SP 10 | none      | 40.5   | 1165  | 10400 |
| 2 1/4  | Blue Dot  | Win 209  | Rem SP 10 | none      | 41.0   | 1165  | 10500 |
| 10 Gauge, 3 1/2 inch Winchester Polyformed with Plastic Base Wad |           |          |           |           |  |       |       |
| 1 1/4  | Green Dot | CCI 209M | Rem SP 10 | (5) 0.135 | 28.0   | 1265  | 8500  |
| 1 1/4  | Green Dot | Win 209  | Rem SP 10 | (5) 0.135 | 28.5   | 1265  | 8600  |
| 1 5/8  | Herco     | CCI 209M | Rem SP 10 | (3) 0.135 | 35.5   | 1285  | 10400 |
| 1 5/8  | Blue Dot  | CCI 209M | Rem SP 10 | (3) 0.135 | 44.5   | 1285  | 8700  |

10 Gauge Reloading Data continued

| 10 Gauge, 3 1/2 inch Win Polyformed with Plastic Base Wad continued |          |          |           |           |  |       |       |
|---|----------|----------|-----------|-----------|--|-------|-------|
| Shot  | Powder   | Primer   | Wad       | Spacers   | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |       |       |
| (oz)  |          |          |           |           | (grains)   | (fps) | (psi) |
| 1 5/8   | Blue Dot | Win 209  | Rem SP 10 | (3) 0.135 | 45.0   | 1285  | 8800  |
| 1 7/8   | Blue Dot | CCI 209M | Rem SP 10 | (2) 0.135 | 45.0   | 1270  | 9800  |
| 1 7/8   | Blue Dot | Win 209  | Rem SP 10 | (2) 0.135 | 45.5   | 1270  | 10200 |
| 2   | Blue Dot | CCI 209M | Rem SP 10 | (1) 0.135 | 43.0   | 1210  | 9400  |
| 2   | Blue Dot | Win 209  | Rem SP 10 | (1) 0.135 | 43.5   | 1210  | 9500  |
| 2 1/4   | Blue Dot | CCI 209M | Rem SP 10 | none      | 41.5   | 1165  | 10500 |
| 2 1/4   | Blue Dot | Win 209  | Rem SP 10 | none      | 42.0   | 1165  | 10500 |

| 12 GAUGE RELOADING DATA  |                 |          |                              |  |                   |                   |                   |
|--|-----------------|----------|------------------------------|--|-------------------|-------------------|-------------------|
| 12 Gauge, 2 3/4 inch Cheddite Plastic  |                 |          |                              |  |                   |                   |                   |
| Shot   | Powder          | Primer   | Wad                          | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                   |                   |                   |
| (oz)   |                 |          |                              | 1145 fps   | 1200 fps          | 1255 fps          | 1300 fps          |
| 1  | Red Dot         | Cheddite | 12SO                         |  | 19.0 grs 7800 psi | 20.0 grs 8700 psi | 21.0 grs 9300 psi |
| 1  | American Select | Cheddite | 12SO                         |  | 20.0 grs 6200 psi | 21.5 grs 7000 psi | 22.5 grs 7600 psi |
| 1  | Green Dot       | Cheddite | 12SO                         |  | 21.5 grs 6900 psi | 23.0 grs 7800 psi | 24.0 grs 8300 psi |
| 1 1/8  | Red Dot         | Cheddite | 12S3 & DRF3                  | 18.0 grs 9000 psi  | 19.5 grs 9600 psi |                   |                   |
| 1 1/8  | Red Dot         | Cheddite | RXP 12                       | 18.0 grs 8500 psi  | 19.5 grs 8800 psi |                   |                   |
| 1 1/8  | American Select | Cheddite | 12S3 & DRF3                  | 19.0 grs 7600 psi  | 20.5 grs 8800 psi |                   |                   |
| 1 1/8  | American Select | Cheddite | RXP 12                       | 19.5 grs 7200 psi  | 20.5 grs 7600 psi |                   |                   |
| 1 1/8  | Green Dot       | Cheddite | 12S3 & DRF3                  | 20.0 grs 7500 psi  | 21.5 grs 8300 psi |                   |                   |
| 1 1/8  | Green Dot       | Cheddite | RXP 12                       | 20.5 grs 7100 psi  | 22.0 grs 7800 psi |                   |                   |
| 12 GAUGE 2 3/4 INCH REMINGTON PLASTIC SHELLS (STS, NITRO 27, PREMIER RXP AND GUN CLUB) |                 |          |                              |  |                   |                   |                   |
| 12 Gauge 7/8 and 1 Ounce Target Loads  |                 |          |                              |  |                   |                   |                   |
| Shot   | Powder          | Primer   | Wad                          | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                   |                   |                   |
| (oz)   |                 |          |                              | 1150 fps   | 1200 fps          | 1250 fps          | 1310 fps          |
| 7/8  | Red Dot         | Rem 209P | CB 4100-12B                  |  | 17.5 grs 7100 psi | 18.0 grs 7400 psi | 19.0 grs 8100 psi |
| 7/8  | Red Dot         | Rem 209P | Purple PC                    |  | 17.5 grs 6800 psi | 18.5 grs 6900 psi | 20.0 grs 7500 psi |
| 7/8  | Red Dot         | Rem 209P | TGT 12 & DRRT12              |  | 17.0 grs 6800 psi | 18.5 grs 7100 psi | 20.5 grs 8200 psi |
| 7/8  | Red Dot         | Rem 209P | WAA12L & DR XXL (Pink)       |  | 16.5 grs 8000 psi | 17.5 grs 8700 psi | 18.5 grs 9100 psi |
| 7/8  | Red Dot         | Rem 209P | WAA12SL&DRXL-1 & Jammer XL-1 |  | 17.0 grs 7000 psi | 18.5 grs 7800 psi | 20.5 grs 8000 psi |
| 7/8  | e3              | Rem 209P | WAA12L& DR XXL(Pink)         |  | 16.0 grs 7265 psi | 17.0 grs 7655 psi | 18.0 grs 8525 psi |
| 7/8  | e3              | Rem 209P | CB 4100-12B                  |  | 16.2 grs 6195 psi | 17.2 grs 7045 psi | 18.2 grs 7580 psi |



12 Gauge 2 3/4 inch Remington Plastic Shells (STS, Nitro 27, Premier RXP and Gun Club) continued

| 12 Gauge 7/8 and 1 Ounce Target Loads continued |                 |          |                                |  |                    |                    |                    |
|---|-----------------|----------|--------------------------------|--|--------------------|--------------------|--------------------|
| Shot  | Powder          | Primer   | Wad                            | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                    |                    |                    |
| (oz)  |                 |          |                                | 1150 fps   | 1200 fps           | 1250 fps           | 1310 fps           |
| 7/8   | e3              | Rem 209P | TGT 12 & DRRT12                |  |                    | 17.0 grs 7820 psi  | 17.8 grs 8585 psi  |
| 7/8   | Clay Dot        | Rem 209P | CB 4100-12B                    |  | 17.5 grs 5400 psi  | 18.5 grs 5760 psi  | 19.0 grs 7020 psi  |
| 7/8   | Clay Dot        | Rem 209P | TGT 12 & DRRT12                |  | 17.0 grs 6490 psi  | 17.5 grs 6910 psi  | 18.5 grs 7770 psi  |
| 7/8   | Clay Dot        | Rem 209P | CB 0178                        |  | 17.5 grs 5916 psi  | 18.0 grs 6060 psi  | 18.5 grs 6544 psi  |
| 7/8   | American Select | Rem 209P | CB 4100-12B                    |  | 18.9 grs 5200 psi  | 19.6 grs 5900 psi  | 20.5 grs 6700 psi  |
| 7/8   | American Select | Rem 209P | TGT 12 & DRRT12                |  |                    |                    | 20.5 grs 7000 psi  |
| 7/8   | American Select | Rem 209P | WAA12L & DR XXL(Pink)          |  | 18.0 grs 5.800 psi | 19.0 grs 6800 psi  | 20.0 grs 7200 psi  |
| 7/8   | American Select | Rem 209P | WAA12SL & DRXL-1 & Jammer XL-1 |  |                    |                    | 20.5 grs 7900 psi  |
| 7/8   | American Select | Rem 209P | CB 1100-12                     |  |                    |                    | 20.5 grs 6900 psi  |
| 7/8   | Green Dot       | Rem 209P | TGT 12 & DRRT12                |  |                    |                    | 22.0 grs 7100 psi  |
| 7/8   | Promo           | Rem 209P | CB 4100-12B                    |  | 17.5 grs 7100 psi  | 18.0 grs 7400 psi  | 19.0 grs 8100 psi  |
| 7/8   | Promo           | Rem 209P | Purple PC                      |  | 17.5 grs 6800 psi  | 18.5 grs 6900 psi  | 20.0 grs 7500 psi  |
| 7/8   | Promo           | Rem 209P | TGT 12 & DRRT12                |  | 17.0 grs 6800 psi  | 18.5 grs 7100 psi  | 20.5 grs 8200 psi  |
| 7/8   | Promo           | Rem 209P | WAA12L & DR XXL(Pink)          |  | 16.5 grs 8000 psi  | 17.5 grs 8700 psi  | 18.5 grs 9100 psi  |
| 7/8   | Promo           | Rem 209P | WAA12SL&DRXL-1 & Jammer XL-1   |  | 17.0 grs 7000 psi  | 18.5 grs 7800 psi  | 20.5 grs 8000 psi  |
| 1   | Clay Dot        | Rem 209P | CB 4100-12B                    |  | 17.5 grs 6800 psi  | 18.5 grs 7940 psi  | 19.5 grs 9050 psi  |
| 1   | Clay Dot        | Rem 209P | TGT 12 & DRRT12                |  | 17.5 grs 7930 psi  | 18.5 grs 9080 psi  | 19.5 grs 10070 psi |
| 1   | Clay Dot        | Fed 209A | WAA12SL                        |  | 16.5 grs 8240 psi  | 17.7 grs 8800 psi  |                    |
| 1   | Clay Dot        | Win 209  | WAA12SL                        |  | 17.0 grs 7860 psi  | 18.4 grs 8980 psi  |                    |
| 1   | Clay Dot        | Win 209  | TGT 12 & DRRT12                |  | 17.6 grs 7590 psi  | 18.8 grs 8890 psi  |                    |
| 1   | e3              | Rem 209P | WAA12L & DR XXL (Pink)         | 15.5 grs 8950 psi  | 16.5 grs 10015 psi | 17.5 grs 10530 psi |                    |
| 1   | e3              | Rem 209P | CB 1100-12                     | 16.0 grs 7730 psi  | 17.0 grs 8730 psi  | 18.0 grs 9540 psi  | 19.0 grs 10040 psi |
| 1   | e3              | Rem 209P | TGT 12 & DRRT12                | 16.0 grs 7970 psi  | 16.9 grs 8550 psi  | 18.0 grs 9710 psi  | 19.0 grs 10850 psi |
| 1   | e3              | Rem 209P | Green Duster                   |  | 17.0 grs 9455 psi  | 17.5 grs 10970 psi |                    |
| 1   | Red Dot         | Rem 209P | CB 1100-12                     | 16.5 grs 7400 psi  | 17.8 grs 8000 psi  | 18.7 grs 8800 psi  | 19.7 grs 9400 psi  |
| 1   | Red Dot         | Rem 209P | TGT 12 & DRRT12                | 17.0 grs 8300 psi  | 18.0 grs 8700 psi  | 19.0 grs 9500 psi  | 21.0 grs 10700 psi |
| 1   | Red Dot         | Rem 209P | WAA12L & DR XXL (Pink)         | 16.5 grs 8100 psi  | 18.0 grs 9600 psi  |                    |                    |
| 1   | Red Dot         | Rem 209P | WAA12SL & DRXL-1 & Jammer XL-1 |  |                    | 19.5 grs 10100 psi | 20.5 grs 10400 psi |
| 1   | Red Dot         | Rem 209P | Purple PC                      |  | 18.5 grs 8300 psi  | 19.5 grs 8900 psi  | 20.5 grs 9100 psi  |
| 1   | Red Dot         | Rem 209P | Green Duster                   |  | 17.5 grs 10000 psi | 18.5 grs 10900 psi |                    |

12 Gauge 2 3/4 inch Remington Plastic Shells (STS, Nitro 27, Premier RXP and Gun Club) continued

| 12 Gauge 7/8 and 1 Ounce Target Loads continued |                 |          |                                |  |                    |                    |                    |
|---|-----------------|----------|--------------------------------|--|--------------------|--------------------|--------------------|
| Shot  | Powder          | Primer   | Wad                            | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                    |                    |                    |
| (oz)  |                 |          |                                | 1150 fps   | 1200 fps           | 1250 fps           | 1310 fps           |
| 1   | Red Dot         | Rem 209P | Rem R12L                       |  |                    |                    | 20.5 grs 9900 psi  |
| 1   | Red Dot         | Rem 209P | Figure 8 & DRRF8               |  |                    |                    | 21.5 grs 9100 psi  |
| 1   | Red Dot         | CCI 209M | Rem R12L                       |  |                    |                    | 20.0 grs 10300 psi |
| 1   | Red Dot         | Win 209  | Rem R12L                       |  |                    |                    | 20.0 grs 10100 psi |
| 1   | American Select | Rem 209P | TGT 12 & DRRT12                | 17.0 grs 6900 psi  | 19.0 grs 7000 psi  | 20.5 grs 8000 psi  | 22.5 grs 8700 psi  |
| 1   | American Select | Rem 209P | WAA12L & DR XXL (Pink)         | 17.0 grs 7500 psi  |                    |                    |                    |
| 1   | American Select | Rem 209P | CB 1100-12                     |  | 19.5 grs 7500 psi  | 20.5 grs 8000 psi  | 22.5 grs 8500 psi  |
| 1   | American Select | Rem 209P | Green Duster                   |  | 19.0 grs 7700 psi  | 20.0 grs 8400 psi  |                    |
| 1   | American Select | Rem 209P | WAA12SL & DRXL-1 & Jammer XL-1 |  | 19.0 grs 7600 psi  | 20.5 grs 8700 psi  | 21.5 grs 9200 psi  |
| 1   | Green Dot       | Rem 209P | CB 1100-12                     | 18.5 grs 7000 psi  | 19.2 grs 7500 psi  | 21.0 grs 8300 psi  | 22.0 grs 8500 psi  |
| 1   | Green Dot       | Rem 209P | TGT 12 & DRRT12                | 18.0 grs 6600 psi  | 20.0 grs 8200 psi  | 21.0 grs 8500 psi  | 22.5 grs 8900 psi  |
| 1   | Green Dot       | Rem 209P | WAA12L & DR XXL (Pink)         | 18.0 grs 6300 psi  |                    |                    |                    |
| 1   | Green Dot       | Rem 209P | Green Duster                   |  | 19.5 grs 7500 psi  | 22.0 grs 8800 psi  |                    |
| 1   | Green Dot       | Rem 209P | Purple PC                      |  | 20.5 grs 7000 psi  | 21.5 grs 8500 psi  | 22.5 grs 8900 psi  |
| 1   | Green Dot       | Rem 209P | WAA12SL & DRXL-1 & Jammer XL-1 |  | 19.5 grs 8600 psi  | 21.5 grs 8900 psi  | 22.5 grs 9000 psi  |
| 1   | Green Dot       | CCI 209M | Rem R12L                       |  |                    |                    | 22.0 grs 9100 psi  |
| 1   | Green Dot       | Win 209  | Rem R12L                       |  |                    |                    | 22.0 grs 8700 psi  |
| 1   | Promo           | Rem 209P | CB 1100-12                     | 16.5 grs 7400 psi  | 17.8 grs 8000 psi  | 18.7 grs 8800 psi  | 19.7 grs 9400 psi  |
| 1   | Promo           | Rem 209P | TGT 12 & DRRT12                | 17.0 grs 8300 psi  | 18.0 grs 8700 psi  | 19.0 grs 9500 psi  | 21.0 grs 10700 psi |
| 1   | Promo           | Rem 209P | WAA12L & DR XXL (Pink)         | 16.5 grs 8100 psi  | 18.0 grs 9600 psi  |                    |                    |
| 1   | Promo           | Rem 209P | WAA12SL & DRXL-1 & Jammer XL-1 |  |                    | 19.5 grs 10100 psi | 20.5 grs 10400 psi |
| 1   | Promo           | Rem 209P | Purple PC                      |  | 18.5 grs 8300 psi  | 19.5 grs 8900 psi  | 20.5 grs 9100 psi  |
| 1   | Promo           | Rem 209P | Green Duster                   |  | 17.5 grs 10000 psi | 18.5 grs 10900 psi |                    |
| 1   | Promo           | Rem 209P | Rem R12L                       |  |                    |                    | 20.5 grs 9900 psi  |
| 1   | Promo           | Rem 209P | Figure 8 & DRRF8               |  |                    |                    | 21.5 grs 9100 psi  |
| 1   | Promo           | CCI 209M | Rem R12L                       |  |                    |                    | 20.0 grs 10300 psi |
| 1   | Promo           | Win 209  | Rem R12L                       |  |                    |                    | 20.0 grs 10100 psi |

12 Gauge 2 3/4 inch Remington Plastic Shells (STS, Nitro 27, Premier RXP and Gun Club) continued

| 12 Gauge 1 1/8 Ounce Target Loads |          |          |                             |  |                    |                    |          |
|-----------------------------------|----------|----------|-----------------------------|--|--------------------|--------------------|----------|
| Shot                              | Powder   | Primer   | Wad                         | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                    |                    |          |
| (oz)                              |          |          |                             | 1090 fps   | 1145 fps           | 1200 fps           | 1250 fps |
| 1 1/8                             | Clay Dot | Rem 209P | WAA12 & DRA12 & DRXL 1 1/8  |  | 17.7 grs 10230 psi | 18.8 grs 10870 psi |          |
| 1 1/8                             | Clay Dot | Rem 209P | Figure 8 & DRRF8            |  | 17.5 grs 10270 psi |                    |          |
| 1 1/8                             | Clay Dot | Fed 209A | WAA12 & DRA12 & DRXL 1 1/8  |  | 16.6 grs 9770 psi  |                    |          |
| 1 1/8                             | Clay Dot | Fed 209A | Figure 8 & DRRF8            |  | 16.9 grs 9570 psi  |                    |          |
| 1 1/8                             | Clay Dot | Win 209  | WAA12 & DRA12 & DRXL 1 1/8  |  | 17.3 grs 9520 psi  |                    |          |
| 1 1/8                             | Clay Dot | Win 209  | Figure 8 & DRRF8            |  | 17.5 grs 9260 psi  |                    |          |
| 1 1/8                             | Clay Dot | CCI 209M | Figure 8 & DRRF8            |  | 17.5 grs 10850 psi |                    |          |
| 1 1/8                             | Clay Dot | CCI 209  | Figure 8 & DRRF8            |  | 17.5 grs 9020 psi  |                    |          |
| 1 1/8                             | e3       | Rem 209P | RXP 12                      | 15.0 grs 8655 psi  | 16.3 grs 9465 psi  | 17.9 grs 10660 psi |          |
| 1 1/8                             | e3       | Rem 209P | Figure 8 & DRRF8            | 15.0 grs 8760 psi  | 16.5 grs 9930 psi  | 17.5 grs 10775 psi |          |
| 1 1/8                             | e3       | Rem 209P | WAA12 & DRA12 & DRXL 1 1/8  | 15.0 grs 9175 psi  | 16.0 grs 10170 psi | 17.2 grs 10960 psi |          |
| 1 1/8                             | e3       | Rem 209P | CB 0118                     | 15.4 grs 8075 psi  | 16.2 grs 8640 psi  | 17.7 grs 10575 psi |          |
| 1 1/8                             | e3       | Rem 209P | CB 4118                     | 15.5 grs 7950 psi  | 16.5 grs 9390 psi  | 18.0 grs 10710 psi |          |
| 1 1/8                             | Red Dot  | Rem 209P | Versalite                   |  | 17.5 grs 9000 psi  |                    |          |
| 1 1/8                             | Red Dot  | Rem 209P | CB 3118-12                  | 16.2 grs 8600 psi  | 17.0 grs 8800 psi  | 18.5 grs 9800 psi  |          |
| 1 1/8                             | Red Dot  | Rem 209P | Blue Duster                 | 16.0 grs 9700 psi  | 17.0 grs 9800 psi  | 18.5 grs 10300 psi |          |
| 1 1/8                             | Red Dot  | Rem 209P | Red PC                      | 16.5 grs 8700 psi  | 17.5 grs 9000 psi  | 19.5 grs 10100 psi |          |
| 1 1/8                             | Red Dot  | Rem 209P | Figure 8 & DRRF8            | 16.5 grs 8300 psi  | 18.0 grs 9200 psi  | 19.0 grs 10100 psi |          |
| 1 1/8                             | Red Dot  | Rem 209P | RXP 12                      | 16.0 grs 8700 psi  | 17.5 grs 8900 psi  | 19.0 grs 10000 psi |          |
| 1 1/8                             | Red Dot  | Rem 209P | WAA12 & DRA12 & DRXL 1 1/8  | 16.0 grs 9400 psi  | 17.0 grs 10100 psi | 18.3 grs 10300 psi |          |
| 1 1/8                             | Red Dot  | Rem 209P | WT-12                       | 15.5 grs 9000 psi  | 18.5 grs 8800 psi  | 19.5 grs 10700 psi |          |
| 1 1/8                             | Red Dot  | Rem 209P | Windjammer                  | 16.5 grs 7900 psi  | 17.5 grs 8900 psi  | 18.5 grs 9400 psi  |          |
| 1 1/8                             | Red Dot  | CCI 209M | Versalite                   |  | 17.0 grs 9100 psi  | 19.0 grs 10400 psi |          |
| 1 1/8                             | Red Dot  | CCI 209M | Red PC                      | 16.5 grs 9200 psi  | 17.5 grs 9400 psi  | 19.0 grs 10400 psi |          |
| 1 1/8                             | Red Dot  | CCI 209M | Figure 8 & DRRF8            | 16.5 grs 9100 psi  | 17.5 grs 9300 psi  | 18.5 grs 10400 psi |          |
| 1 1/8                             | Red Dot  | CCI 209M | RXP 12                      | 16.0 grs 9300 psi  | 17.0 grs 9600 psi  | 18.5 grs 10500 psi |          |
| 1 1/8                             | Red Dot  | CCI 209M | WAA 12 & DRA12 & DRXL 1 1/8 | 16.0 grs 9800 psi  | 16.5 grs 10200 psi |                    |          |
| 1 1/8                             | Red Dot  | CCI 209M | Windjammer                  | 16.5 grs 8300 psi  | 17.0 grs 9000 psi  | 18.5 grs 9700 psi  |          |
| 1 1/8                             | Red Dot  | FIO 616  | Figure 8 & DRRF8            | 16.5 grs 9000 psi  | 17.5 grs 8900 psi  | 19.5 grs 10600 psi |          |
| 1 1/8                             | Red Dot  | Win 209  | Figure 8 & DRRF8            | 16.5 grs 8900 psi  | 18.0 grs 9500 psi  | 19.0 grs 10400 psi |          |
| 1 1/8                             | Red Dot  | CCI 209  | Figure 8 & DRRF8            |  | 17.5 grs 8600 psi  | 19.5 grs 9900 psi  |          |
| 1 1/8                             | Red Dot  | Fed 209A | Red PC                      |  | 17.0 grs 10700 psi |                    |          |
| 1 1/8                             | Red Dot  | Fed 209A | Figure 8 & DRRF8            |  | 16.5 grs 10300 psi | 17.0 grs 10400 psi |          |

12 Gauge 2 3/4 inch Remington Plastic Shells (STS, Nitro 27, Premier RXP and Gun Club) continued

| 12 Gauge 1 1/8 Ounce Target Loads continued |           |          |                             |  |                    |                    |                    |
|---|-----------|----------|-----------------------------|--|--------------------|--------------------|--------------------|
| Shot  | Powder    | Primer   | Wad                         | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                    |                    |                    |
| (oz)  |           |          |                             | 1090 fps   | 1145 fps           | 1200 fps           | 1250 fps           |
| 1 1/8                                       | Red Dot   | Fed 209A | RXP 12                      |  | 16.0 grs 10600 psi | 17.0 grs 10100 psi |                    |
| 1 1/8                                       | Red Dot   | Fed 209A | WAA 12 & DRA12 & DRXL 1 1/8 |  | 17.5 grs 10500 psi |                    |                    |
| 1 1/8                                       | Green Dot | Rem 209P | CB 3118-12                  | 17.5 grs 7800 psi  | 19.0 grs 8700 psi  | 20.3 grs 9700 psi  | 21.0 grs 9800 psi  |
| 1 1/8                                       | Green Dot | Rem 209P | Blue Duster                 | 17.5 grs 8200 psi  | 18.5 grs 9000 psi  | 20.0 grs 9800 psi  | 21.5 grs 10300 psi |
| 1 1/8                                       | Green Dot | Rem 209P | Versalite                   |  | 19.0 grs 8000 psi  | 20.0 grs 8700 psi  |                    |
| 1 1/8                                       | Green Dot | Rem 209P | Red PC                      |  | 19.0 grs 7600 psi  | 21.0 grs 8500 psi  |                    |
| 1 1/8                                       | Green Dot | Rem 209P | Figure 8 & DRRF8            | 19.0 grs 7300 psi  | 18.5 grs 8500 psi  | 21.0 grs 8800 psi  | 21.5 grs 10700 psi |
| 1 1/8                                       | Green Dot | Rem 209P | RXP 12                      | 19.0 grs 7700 psi  | 18.0 grs 8700 ps   | 20.5 grs 8700 psi  |                    |
| 1 1/8                                       | Green Dot | Rem 209P | WAA 12 & DRA12 & DRXL 1 1/8 | 18.0 grs 8500 ps   | 19.0 grs 6700 psi  | 21.0 grs 8900 psi  | 21.1 grs 10000 psi |
| 1 1/8                                       | Green Dot | Rem 209P | WT-12                       | 18.0 grs 8100 psi  | 19.5 grs 8300 psi  | 21.5 grs 8700 psi  | 22.0 grs 10600 psi |
| 1 1/8                                       | Green Dot | Rem 209P | Windjammer                  | 18.0 grs 7300 psi  | 19.5 grs 7800 psi  | 20.5 grs 8200 psi  |                    |
| 1 1/8                                       | Green Dot | Win 209  | Figure 8 & DRRF8            |  | 19.0 grs 8100 psi  | 20.0 grs 8600 psi  |                    |
| 1 1/8                                       | Green Dot | Win 209  | RXP 12                      |  |                    |                    | 22.0 grs 9400 psi  |
| 1 1/8                                       | Green Dot | CCI 209M | Versalite                   |  | 19.0 grs 8000 psi  | 20.0 grs 9200 psi  | 21.5 grs 10200 psi |
| 1 1/8                                       | Green Dot | CCI 209M | Red PC                      | 18.0 grs 7400 psi  | 19.0 grs 7700 psi  | 20.5 grs 9000 psi  | 22.0 grs 9600 psi  |
| 1 1/8                                       | Green Dot | CCI 209M | Figure 8 & DRRF8            | 18.0 grs 8400 psi  | 19.0 grs 8800 psi  | 20.0 grs 9300 psi  |                    |
| 1 1/8                                       | Green Dot | CCI 209M | RXP 12                      | 17.5 grs 8600 psi  | 19.0 grs 9100 psi  | 20.5 grs 9200 psi  | 22.0 grs 9600 psi  |
| 1 1/8                                       | Green Dot | CCI 209M | WAA 12 & DRA12 & DRXL 1 1/8 | 17.0 grs 8700 psi  | 19.0 grs 9400 psi  | 21.0 grs 9600 psi  | 22.5 grs 10700 psi |
| 1 1/8                                       | Green Dot | CCI 209M | Windjammer                  | 18.0 grs 7600 psi  | 19.5 grs 7900 psi  | 20.5 grs 8700 psi  | 22.0 grs 9400 psi  |
| 1 1/8                                       | Green Dot | CCI 209  | Figure 8 & DRRF8            |  | 19.5 grs 7100 psi  | 21.0 grs 9700 psi  |                    |
| 1 1/8                                       | Green Dot | Fed 209A | Red PC                      |  | 19.5 grs 10000 psi |                    |                    |
| 1 1/8                                       | Green Dot | Fed 209A | Figure 8 & DRRF8            |  | 19.5 grs 10100 psi | 20.5 grs 10300 psi |                    |
| 1 1/8                                       | Green Dot | Fed 209A | RXP 12                      |  | 19.5 grs 10500 psi | 21.0 grs 10400 psi |                    |
| 1 1/8                                       | Green Dot | Fed 209A | Windjammer                  |  | 20.0 grs 9600 psi  |                    |                    |
| 1 1/8                                       | Green Dot | FIO 616  | Figure 8 & DRRF8            |  | 19.0 grs 7800 psi  | 20.0 grs 8700 psi  |                    |
| 1 1/8                                       | Green Dot | FIO 616  | RXP 12                      |  |                    |                    | 22.0 grs 9100 psi  |
| 1 1/8                                       | Promo     | Rem 209P | Versalite                   |  | 17.5 grs 9000 psi  |                    |                    |
| 1 1/8                                       | Promo     | Rem 209P | CB 3118-12                  | 16.2 grs 8600 psi  | 17.0 grs 8800 psi  | 18.5 grs 9800 psi  |                    |
| 1 1/8                                       | Promo     | Rem 209P | Blue Duster                 | 16.0 grs 9700 psi  | 17.0 grs 9800 psi  | 18.5 grs 10300 psi |                    |
| 1 1/8                                       | Promo     | Rem 209P | Red PC                      | 16.5 grs 8700 psi  | 17.5 grs 9000 psi  | 19.5 grs 10100 psi |                    |
| 1 1/8                                       | Promo     | Rem 209P | Figure 8 & DRRF8            | 16.5 grs 8300 psi  | 18.0 grs 9200 psi  | 19.0 grs 10100 psi |                    |
| 1 1/8                                       | Promo     | Rem 209P | RXP 12                      | 16.0 grs 8700 psi  | 17.5 grs 8900 psi  | 19.0 grs 10000 psi |                    |
| 1 1/8                                       | Promo     | Rem 209P | WAA 12 & DRA12 & DRXL 1 1/8 | 16.0 grs 9400 psi  | 17.0 grs 10100 psi | 18.3 grs 10300 psi |                    |
| 1 1/8                                       | Promo     | Rem 209P | WT-12                       | 15.5 grs 9000 psi  | 18.5 grs 8800 psi  | 19.5 grs 10700 psi |                    |

12 Gauge 2 3/4 inch Remington Plastic Shells (STS, Nitro 27, Premier RXP and Gun Club) continued

| 12 Gauge 1 1/8 Ounce Target Loads continued |                 |          |                             |  |                    |                    |                    |  |
|---|-----------------|----------|-----------------------------|--|--------------------|--------------------|--------------------|--|
| Shot  | Powder          | Primer   | Wad                         | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                    |                    |                    |  |
| (oz)  |                 |          |                             | 1090 fps   | 1145 fps           | 1200 fps           | 1250 fps           |  |
| 1 1/8                                       | Promo           | Rem 209P | Windjammer                  | 16.5 grs 7900 psi  | 17.5 grs 8900 psi  | 18.5 grs 9400 psi  |                    |  |
| 1 1/8                                       | Promo           | CCI 209M | Versalite                   |  | 17.0 grs 9100 psi  | 19.0 grs 10400 psi |                    |  |
| 1 1/8                                       | Promo           | CCI 209M | Red PC                      | 16.5 grs 9200 psi  | 17.5 grs 9400 psi  | 19.0 grs 10400 psi |                    |  |
| 1 1/8                                       | Promo           | CCI 209M | Figure 8 & DRRF8            | 16.5 grs 9100 psi  | 17.5 grs 9300 psi  | 18.5 grs 10400 psi |                    |  |
| 1 1/8                                       | Promo           | CCI 209M | RXP 12                      | 16.0 grs 9300 psi  | 17.0 grs 9600 psi  | 18.5 grs 10500 psi |                    |  |
| 1 1/8                                       | Promo           | CCI 209M | WAA 12 & DRA12 & DRXL 1 1/8 | 16.0 grs 9800 psi  | 16.5 grs 10200 psi |                    |                    |  |
| 1 1/8                                       | Promo           | CCI 209M | Windjammer                  | 16.5 grs 8300 psi  | 17.0 grs 9000 psi  | 18.5 grs 9700 psi  |                    |  |
| 1 1/8                                       | Promo           | FIO 616  | Figure 8 & DRRF8            | 16.5 grs 9000 psi  | 17.5 grs 8900 psi  | 19.5 grs 10600 psi |                    |  |
| 1 1/8                                       | Promo           | Win 209  | Figure 8 & DRRF8            | 16.5 grs 8900 psi  | 18.0 grs 9500 psi  | 19.0 grs 10400 psi |                    |  |
| 1 1/8                                       | Promo           | CCI 209  | Figure 8 & DRRF8            |  | 17.5 grs 8600 psi  | 19.5 grs 9900 psi  |                    |  |
| 1 1/8                                       | Promo           | Fed 209A | Red PC                      |  | 17.0 grs 10700 psi |                    |                    |  |
| 1 1/8                                       | Promo           | Fed 209A | Figure 8 & DRRF8            |  | 16.5 grs 10300 psi | 17.0 grs 10400 psi |                    |  |
| 1 1/8                                       | Promo           | Fed 209A | RXP 12                      |  | 16.0 grs 10600 psi | 17.0 grs 10100 psi |                    |  |
| 1 1/8                                       | Promo           | Fed 209A | WAA 12 & DRA12 & DRXL 1 1/8 |  | 17.5 grs 10500 psi |                    |                    |  |
| 1 1/8                                       | American Select | Rem 209P | CB 3118-12                  | 17.5 grs 6900 psi  | 19.0 grs 8400 psi  | 20.0 grs 9500 psi  | 21.5 grs 10600 psi |  |
| 1 1/8                                       | American Select | Rem 209P | Blue Duster                 | 17.0 grs 8000 psi  | 18.0 grs 8900 psi  | 20.0 grs 10200 psi |                    |  |
| 1 1/8                                       | American Select | Rem 209P | Red PC                      | 17.5 grs 7000 psi  | 19.0 grs 8200 psi  | 20.5 grs 9700 psi  |                    |  |
| 1 1/8                                       | American Select | Rem 209P | Figure 8 & DRRF8            | 17.5 grs 7100 psi  | 19.0 grs 7600 psi  | 20.5 grs 9100 psi  | 21.5 grs 9900 psi  |  |
| 1 1/8                                       | American Select | Rem 209P | RXP 12                      | 17.0 grs 7500 psi  | 18.5 grs 8300 psi  | 20.5 grs 10200 psi | 21.0 grs 10500 psi |  |
| 1 1/8                                       | American Select | Rem 209P | WAA 12 & DRA12 & DRXL 1 1/8 | 17.0 grs 8100 psi  | 18.0 grs 9000 psi  | 19.2 grs 11000 psi |                    |  |
| 1 1/8                                       | American Select | Rem 209P | WT-12                       | 17.0 grs 7300 psi  | 18.5 grs 8900 psi  | 20.0 grs 10600 psi |                    |  |
| 1 1/8                                       | American Select | Rem 209P | Windjammer                  | 18.0 grs 6900 psi  | 19.0 grs 7900 psi  | 20.5 grs 9100 psi  |                    |  |
| 1 1/8                                       | American Select | Win 209  | Figure 8 & DRRF8            |  | 18.5 grs 9000 psi  | 20.0 grs 10200 psi |                    |  |
| 1 1/8                                       | American Select | Fed 209A | Figure 8 & DRRF8            |  | 18.5 grs 9200 psi  | 20.0 grs 10700 psi |                    |  |
| 1 1/8                                       | 20/28           | CCI 209M | Figure 8                    |  |                    | 22.0 grs 7010 psi  | 23.0 grs 7400 psi  |  |
| 1 1/8                                       | 20/28           | CCI 209M | CB 3118-12                  |  |                    | 20.5 grs 8260 psi  | 21.4 grs 8930 psi  |  |
| 1 1/8                                       | 20/28           | CCI 209M | Win AA-12                   |  |                    | 21.3 grs 7730 psi  | 22.0 grs 7960 psi  |  |
| 1 1/8                                       | 20/28           | Rem 209P | CB 3118-12                  |  |                    | 20.8 grs 7660 psi  | 21.7 grs 8720 psi  |  |

12 Gauge 2 3/4 inch Remington Plastic Shells (STS, Nitro 27, Premier RXP and Gun Club) continued

| 12 Gauge 1 1/8 Ounce Target Loads continued |        |          |                             |  |          |                   |                    |  |
|---|--------|----------|-----------------------------|--|----------|-------------------|--------------------|--|
| Shot  | Powder | Primer   | Wad                         | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |          |                   |                    |  |
| (oz)  |        |          |                             | 1090 fps   | 1145 fps | 1200 fps          | 1250 fps           |  |
| 1 1/8                                       | 20/28  | Rem 209P | Figure 8                    |  |          | 21.7 grs 6410 psi | 22.5 grs 7340 psi  |  |
| 1 1/8                                       | 20/28  | Fio 616  | Figure 8                    |  |          | 22.1 grs 6380 psi | 23.0 grs 7170 psi  |  |
| 1 1/8                                       | 20/28  | Win 209  | Figure 8                    |  |          | 22.0 grs 6710 psi | 23.0 grs 7370 psi  |  |
| 1 1/8                                       | 20/28  | Win 209  | CB 3118-12                  |  |          | 20.6 grs 8050 psi | 21.6 grs 8920 psi  |  |
| 1 1/8                                       | Unique | CCI 209M | Figure 8 & DRRF8            |  |          | 22.5 grs 9500 psi |                    |  |
| 1 1/8                                       | Unique | CCI 209  | Figure 8 & DRRF8            |  |          | 22.5 grs 8500 psi |                    |  |
| 1 1/8                                       | Unique | CCI 209M | Versalite                   |  |          | 22.0 grs 8800 psi | 23.5 grs 9900 psi  |  |
| 1 1/8                                       | Unique | CCI 209M | Red PC                      |  |          | 22.5 grs 8700 psi | 24.0 grs 9400 psi  |  |
| 1 1/8                                       | Unique | CCI 209M | RXP 12                      |  |          | 22.5 grs 9500 psi | 24.0 grs 10400 psi |  |
| 1 1/8                                       | Unique | CCI 209M | WAA 12 & DRA12 & DRXL 1 1/8 |  |          | 22.0 grs 9300 psi | 24.0 grs 10300 psi |  |
| 1 1/8                                       | Unique | CCI 209M | Windjammer                  |  |          | 23.5 grs 8200 psi | 25.0 grs 9300 psi  |  |
| 1 1/8                                       | Unique | Fed 209A | Figure 8 & DRRF8            |  |          | 23.0 grs 9200 psi |                    |  |
| 1 1/8                                       | Unique | Fed 209A | RXP 12                      |  |          | 22.0 grs 9100 psi |                    |  |
| 1 1/8                                       | Unique | FIO 616  | Figure 8 & DRRF8            |  |          | 23.0 grs 8500 psi | 23.5 grs 9100 psi  |  |
| 1 1/8                                       | Unique | Rem 209P | CB 3118-12                  |  |          | 22.2 grs 7300 psi |                    |  |
| 1 1/8                                       | Unique | Rem 209P | Blue Duster                 |  |          | 22.7 grs 7800 psi |                    |  |
| 1 1/8                                       | Unique | Rem 209P | Versalite                   |  |          | 22.0 grs 7900 psi |                    |  |
| 1 1/8                                       | Unique | Rem 209P | Red PC                      |  |          | 22.5 grs 7800 psi |                    |  |
| 1 1/8                                       | Unique | Rem 209P | Figure 8 & DRRF8            |  |          | 22.5 grs 8200 psi |                    |  |
| 1 1/8                                       | Unique | Rem 209P | RXP 12                      |  |          | 22.5 grs 8300 psi |                    |  |
| 1 1/8                                       | Unique | Rem 209P | WAA 12 & DRA12 & DRXL 1 1/8 |  |          | 22.0 grs 8900 psi |                    |  |
| 1 1/8                                       | Unique | Rem 209P | WT-12                       |  |          | 23.5 grs 8300 psi |                    |  |
| 1 1/8                                       | Unique | Rem 209P | Windjammer                  |  |          | 23.5 grs 7000 psi |                    |  |
| 1 1/8                                       | Unique | Win 209  | Figure 8 & DRRF8            |  |          | 22.5 grs 8400 psi |                    |  |
| 1 1/8                                       | Unique | Win 209  | RXP 12                      |  |          |                   | 24.5 grs 8800 psi  |  |
| 1 1/8                                       | Herco  | CCI 209M | Versalite                   |  |          |                   | 24.5 grs 9900 psi  |  |
| 1 1/8                                       | Herco  | CCI 209M | Red PC                      |  |          |                   | 25.0 grs 9500 psi  |  |
| 1 1/8                                       | Herco  | CCI 209M | RXP 12                      |  |          |                   | 24.5 grs 9800 psi  |  |
| 1 1/8                                       | Herco  | CCI 209M | WAA 12 & DRA12 & DRXL 1 1/8 |  |          |                   | 24.5 grs 10400 psi |  |
| 1 1/8                                       | Herco  | CCI 209M | Windjammer                  |  |          |                   | 25.0 grs 9400 psi  |  |
| 1 1/8                                       | Herco  | FIO 616  | RXP 12                      |  |          | 23.0 grs 8500 psi |                    |  |



12 Gauge 2 3/4 inch Remington Plastic Shells (STS, Nitro 27, Premier RXP and Gun Club) continued

| 12 Gauge 1 1/4 Ounce Loads |           |          |            |  |                    |                    |                    |
|----------------------------|-----------|----------|------------|--|--------------------|--------------------|--------------------|
| Shot                       | Powder    | Primer   | Wad        | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                    |                    |                    |
| (oz)                       |           |          |            | 1250 fps   | 1350 fps           | 1375 fps           | 1400 fps           |
| 1 1/4                      | 20/28     | Rem 209P | SP 12      | 23.0 grs 8840 psi  |                    |                    |                    |
| 1 1/4                      | 20/28     | Win 209  | SP 12      | 23.0 grs 8950 psi  |                    |                    |                    |
| 1 1/4                      | 20/28     | CCI 209M | SP 12      | 23.5 grs 9510 psi  |                    |                    |                    |
| 1 1/4                      | 20/28     | Rem 209P | WAA12F114  | 22.5 grs 10390 psi                                       |                    |                    |                    |
| 1 1/4                      | Pro Reach | Win 209  | CB 1138-12 |  |                    |                    | 30.0 grs 10710 psi |
| 1 1/4                      | Pro Reach | CCI 209M | Rem 12L    |  |                    | 28.7 grs 10820 psi |                    |
| 1 1/4                      | Pro Reach | CCI 209M | WAAF 114   |  | 27.0 grs 11000 psi |                    |                    |
| 1 1/4                      | Pro Reach | Fed 209A | Rem 12L    |  |                    | 28.1 grs 10860 psi |                    |
| 1 1/4                      | Pro Reach | Fed 209A | WAA 12R    |  | 27.3 grs 10630 psi |                    |                    |
| 1 1/4                      | Pro Reach | Rem 209P | Fed 12S4   |  | 27.4 grs 11060 psi |                    |                    |
| 1 1/4                      | Pro Reach | Rem 209P | Rem 12L    |  |                    |                    | 29.5 grs 10940 psi |
| 1 1/4                      | Pro Reach | Rem 209P | WAA 12R    |  |                    | 28.2 grs 10690 psi |                    |
| 1 1/4                      | Pro Reach | Cheddite | CB 1138-12 |  | 27.6 grs 10230 psi |                    | 28.5 grs 10890 psi |
| 1 1/4                      | Pro Reach | Rem 209P | WAA12F114  |  |                    | 29.0 grs 10590 psi |                    |
| 1 1/4                      | Pro Reach | Rem 209P | WAA 12R    |  |                    | 28.2 grs 10500 psi |                    |
| 1 1/4                      | Unique    | CCI 209M | SP 12      | 23.5 grs 10300 psi                                       |                    |                    |                    |
| 1 1/4                      | Unique    | FIO 616  | SP 12      | 23.0 grs 9600 psi  |                    |                    |                    |
| 1 1/4                      | Unique    | Rem 209P | Versalite  | 23.5 grs 9400 psi  |                    |                    |                    |
| 1 1/4                      | Unique    | Rem 209P | SP 12      | 23.5 grs 9300 psi  |                    |                    |                    |
| 1 1/4                      | Unique    | Rem 209P | WAA12F114  | 24.0 grs 10100 psi                                       |                    |                    |                    |
| 1 1/4                      | Unique    | Win 209  | SP 12      | 23.5 grs 10000 psi                                       |                    |                    |                    |
| 1 1/4                      | Herco     | CCI 209M | SP 12      | 24.5 grs 10000 psi                                       |                    |                    |                    |
| 1 1/4                      | Herco     | FIO 616  | SP 12      | 24.5 grs 9300 psi  |                    |                    |                    |
| 1 1/4                      | Herco     | Rem 209P | Versalite  | 25.0 grs 8400 psi  |                    |                    |                    |
| 1 1/4                      | Herco     | Rem 209P | SP 12      | 25.0 grs 9600 psi  |                    |                    |                    |
| 1 1/4                      | Herco     | Rem 209P | WAA12F114  | 24.5 grs 9300 psi  |                    |                    |                    |
| 1 1/4                      | Herco     | Win 209  | SP 12      | 24.5 grs 9600 psi  |                    |                    |                    |
| 1 1/4                      | Blue Dot  | Win 209  | SP 12      | 34.5 grs 9800 psi  |                    |                    |                    |
| 12 Gauge 1 3/8 Ounce Loads |           |          |            |  |                    |                    |                    |
| Shot                       | Powder    | Primer   | Wad        | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                    |                    |                    |
| (oz)                       |           |          |            | 1090 fps   | 1145 fps           | 1200 fps           | 1250 fps           |
| 1 3/8                      | Blue Dot  | CCI 209M | SP 12      |  |                    |                    | 34.0 grs 9400 psi  |
| 1 3/8                      | Blue Dot  | FIO 616  | SP 12      |  |                    |                    | 34.0 grs 9100 psi  |
| 1 3/8                      | Blue Dot  | Rem 209P | CB1138-12  |  |                    |                    | 34.0 grs 9900 psi  |
| 1 3/8                      | Blue Dot  | Rem 209P | SP 12      |  |                    |                    | 35.0 grs 9300 psi  |
| 1 3/8                      | Blue Dot  | Win 209  | SP 12      |  |                    |                    | 35.0 grs 9100 psi  |

12 Gauge 2 3/4 inch Remington Plastic Shells (STS, Nitro 27, Premier RXP and Gun Club) continued

| 12 Gauge 1 3/8 Ounce Loads continued             |                 |          |                                |  |                    |                    |                    |
|--|-----------------|----------|--------------------------------|--|--------------------|--------------------|--------------------|
| Shot   | Powder          | Primer   | Wad                            | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                    |                    |                    |
| (oz)   |                 |          |                                | 1225 fps   | 1250fps            | 1275 fps           | 1300 fps           |
| 1 3/8  | Pro Reach       | Rem 209P | CB 3118-12                     |  |                    |                    | 26.5 grs 10740 psi |
| 1 3/8  | Pro Reach       | Win 209  | SP-12                          |  |                    | 26.7 grs 10710 psi |                    |
| 1 3/8  | Pro Reach       | Fed 209A | SP-12                          |  | 25.0 grs 10780 psi |                    |                    |
| 1 3/8  | Pro Reach       | Rem 209P | SP-12                          |  | 26.2 grs 10630 psi |                    |                    |
| 1 3/8  | Pro Reach       | CCI 209M | SP-12                          |  |                    | 26.4 grs 10840 psi |                    |
| 1 3/8  | Pro Reach       | CCI 209M | 12S4                           | 23.5 grs 10760 psi                                       |                    |                    |                    |
| 1 3/8  | Pro Reach       | Fed 209A | 12S4                           | 22.5 grs 10760 psi                                       |                    |                    |                    |
| 12 GAUGE 2 3/4 INCH WINCHESTER AA PLASTIC SHELLS |                 |          |                                |  |                    |                    |                    |
| 12 Gauge 7/8 and 1 Ounce Target Loads            |                 |          |                                |  |                    |                    |                    |
| Shot   | Powder          | Primer   | Wad                            | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                    |                    |                    |
| (oz)   |                 |          |                                | 1145 fps   | 1200 fps           | 1250 fps           | 1300 fps           |
| 7/8  | e3              | Win 209  | TGT 12 & DRRT12                |  | 15.7 grs 7380 psi  | 16.5 grs 8200 psi  | 18.3 grs 8730 psi  |
| 7/8  | e3              | Win 209  | CB 4100-12B                    |  | 16.0 grs 6870 psi  | 17.0 grs 7475 psi  |                    |
| 7/8  | e3              | Win 209  | WAA12L & DR XXL(Pink)          |  | 16.0 grs 7425 psi  | 17.0 grs 8210 psi  | 18.0 grs 8385 psi  |
| 7/8  | Red Dot         | Win 209  | CB 4100-12                     |  | 17.5 grs 6900 psi  | 18.0 grs 7600 psi  | 18.5 grs 7900 psi  |
| 7/8  | Red Dot         | Win 209  | Purple PC                      |  | 17.0 grs 7500 psi  | 18.0 grs 8400 psi  | 19.5 grs 9000 psi  |
| 7/8  | Red Dot         | Win 209  | TGT 12 & DRRT12                |  | 16.5 grs 7300 psi  | 18.0 grs 8400 psi  | 19.0 grs 9300 psi  |
| 7/8  | Red Dot         | Win 209  | WAA12L & DR XXL(Pink)          |  | 16.5 grs 7900 psi  | 17.5 grs 8600 psi  | 18.5 grs 9300 psi  |
| 7/8  | Red Dot         | Win 209  | WAA12SL&DRXL-1 & Jammer XL-1   |  | 16.5 grs 7300 psi  | 18.0 grs 9300 psi  | 19.0 grs 10300 psi |
| 7/8  | American Select | Win 209  | CB 4100-12B                    |  | 18.5 grs 5600 psi  | 19.5 grs 6100 psi  | 20.5 grs 6900 psi  |
| 7/8  | American Select | Win 209  | WAA12L & DR XXL (Pink)         |  | 17.6 grs 6200 psi  | 18.5 grs 7200 psi  | 19.5 grs 8000 psi  |
| 7/8  | American Select | Win 209  | CB 1100-12                     |  |                    |                    | 21.0 grs 7200 psi  |
| 7/8  | American Select | Win 209  | Purple PC                      |  |                    |                    | 20.5 grs 7200 psi  |
| 7/8  | American Select | Win 209  | TGT 12 & DRRT12                |  |                    |                    | 20.5 grs 7600 psi  |
| 7/8  | American Select | Win 209  | WAA12SL&DRXL-1 & Jammer XL-1   |  |                    |                    | 20.5 grs 8400 psi  |
| 7/8  | Promo           | Win 209  | CB 4100-12                     |  | 17.5 grs 6900 psi  | 18.0 grs 7600 psi  | 18.5 grs 7900 psi  |
| 7/8  | Promo           | Win 209  | Purple PC                      |  | 17.0 grs 7500 psi  | 18.0 grs 8400 psi  | 19.5 grs 9000 psi  |
| 7/8  | Promo           | Win 209  | TGT 12 & DRRT12                |  | 16.5 grs 7300 psi  | 18.0 grs 8400 psi  | 19.0 grs 9300 psi  |
| 7/8  | Promo           | Win 209  | WAA12L & DR XXL(Pink)          |  | 16.5 grs 7900 psi  | 17.5 grs 8600 psi  | 18.5 grs 9300 psi  |
| 7/8  | Promo           | Win 209  | WAA12SL & DRXL-1 & Jammer XL-1 |  | 16.5 grs 7300 psi  | 18.0 grs 9300 psi  | 19.0 grs 10300 psi |
| 7/8  | Green Dot       | Win 209  | Purple PC                      |  |                    |                    | 21.5 grs 7900 psi  |
| 7/8  | Green Dot       | Win 209  | TGT 12 & DRRT12                |  |                    |                    | 21.0 grs 8400 psi  |

12 Gauge 2 3/4 inch Winchester AA Plastic Shells continued

| 12 Gauge 7/8 and 1 Ounce Target Loads continued |                 |          |                                |  |                    |                    |                    |
|---|-----------------|----------|--------------------------------|--|--------------------|--------------------|--------------------|
| Shot  | Powder          | Primer   | Wad                            | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                    |                    |                    |
| (oz)  |                 |          |                                | 1145 fps   | 1200 fps           | 1250 fps           | 1300 fps           |
| 7/8   | Green Dot       | Win 209  | WAA12L & DR XXL(Pink)          |  |                    |                    | 20.0 grs 8300 psi  |
| 7/8   | Green Dot       | Win 209  | WAA12SL & DRXL-1 & Jammer XL-1 |  |                    |                    | 20.5 grs 8800 psi  |
| 1   | Clay Dot        | Win 209  | WAA12SL & DRXL-1 & Jammer XL-1 |  | 17.2 grs 9460 psi  | 18.5 grs 10960 psi |                    |
| 1   | Clay Dot        | Rem 209P | WAA12SL & DRXL-1 & Jammer XL-2 |  | 17.4 grs 9280 psi  | 18.6 grs 10840 psi |                    |
| 1   | e3              | Win 209  | WAA12L & DR XXL (Pink)         | 15.0 grs 8635 psi  | 16.5 grs 9410 psi  | 17.5 grs 9740 psi  | 18.5 grs 10870 psi |
| 1   | e3              | Win 209  | WAA12SL & DRXL-1 & Jammer XL-1 | 15.5 grs 8085 psi  | 16.5 grs 9240 psi  | 18.0 grs 10045 psi | 18.5 grs 10080 psi |
| 1   | e3              | Win 209  | TGT 12 & DRRT12                | 15.5 grs 8530 psi  | 16.5 grs 9305 psi  | 17.5 grs 10070 psi | 18.5 grs 11015 psi |
| 1   | e3              | Win 209  | CB 1100-12                     | 16.0 grs 8285 psi  | 17.0 grs 8805 psi  | 18.0 grs 9245 psi  | 19.0 grs 10135 psi |
| 1   | e3              | Win 209  | Green Duster                   | 16.0 grs 8730 psi  | 17.0 grs 9525 psi  | 18.0 grs 10580 psi |                    |
| 1   | Red Dot         | Win 209  | CB 1100-12                     | 17.0 grs 7900 psi  | 18.0 grs 8600 psi  | 19.0 grs 9300 psi  | 19.5 grs 8900 psi  |
| 1   | Red Dot         | Win 209  | WAA12L & DR XXL (Pink)         | 16.5 grs 8000 psi  |                    |                    |                    |
| 1   | Red Dot         | Win 209  | WAA12SL & DRXL-1 & Jammer XL-2 | 16.5 grs 7900 psi  | 18.0 grs 10200 psi | 19.0 grs 10500 psi | 19.5 grs 11200 psi |
| 1   | Red Dot         | Win 209  | Purple PC                      |  | 18.0 grs 8900 psi  | 19.0 grs 9700 psi  | 20.0 grs 10400 psi |
| 1   | Red Dot         | Win 209  | TGT 12 & DRRT12                |  | 18.0 grs 9200 psi  | 19.5 grs 9800 psi  |                    |
| 1   | Red Dot         | Win 209  | WT 12-Orange                   |  | 17.5 grs 10600 psi |                    |                    |
| 1   | Red Dot         | Win 209  | RXP 12                         |  |                    |                    | 20.0 grs 10100 psi |
| 1   | Red Dot         | CCI 209M | WAA 12 & DRA12 & DRXL 1 1/8    |  |                    |                    | 18.5 grs 10400 psi |
| 1   | Red Dot         | Win 209  | WAA 12 & DRA12 & DRXL 1 1/8    |  |                    |                    | 19.0 grs 10500 psi |
| 1   | American Select | Win 209  | CB 1100-12                     | 18.0 grs 6700 psi  | 18.5 grs 6900 psi  | 20.5 grs 8800 psi  | 21.5 grs 9200 psi  |
| 1   | American Select | Win 209  | Green Duster                   |  | 19.0 grs 8100 psi  | 20.0 grs 8900 psi  | 21.5 grs 9700 psi  |
| 1   | American Select | Win 209  | TGT 12 & DRRT12                |  | 19.0 grs 8000 psi  | 20.0 grs 9100 psi  | 21.0 grs 9500 psi  |
| 1   | American Select | Win 209  | WT 12-Orange                   |  | 19.0 grs 8400 psi  |                    |                    |
| 1   | American Select | Win 209  | WAA12L & DR XXL (Pink)         | 18.0 grs 6700 psi  |                    |                    |                    |
| 1   | American Select | Win 209  | WAA12SL & DRXL-1 & Jammer XL-2 | 17.5 grs 7600 psi  | 19.0 grs 8200 psi  | 20.0 grs 9500 psi  | 21.5 grs 10300 psi |
| 1   | Green Dot       | CCI 209M | WAA 12 & DRA12 & DRXL 1 1/8    |  |                    |                    | 21.5 grs 9900 psi  |
| 1   | Green Dot       | Win 209  | CB 1100-12                     | 18.5 grs 7100 psi  | 19.8 grs 7700 psi  | 21.0 grs 8200 psi  | 22.0 grs 9100 psi  |
| 1   | Green Dot       | Win 209  | Green Duster                   |  | 19.5 grs 8300 psi  | 20.5 grs 9200 psi  | 22.0 grs 9500 psi  |
| 1   | Green Dot       | Win 209  | Purple PC                      |  | 19.5 grs 7000 psi  | 21.5 grs 8700 psi  | 22.0 grs 9000 psi  |

12 Gauge 2 3/4 inch Winchester AA Plastic Shells continued

| 12 Gauge 7/8 and 1 Ounce Target Loads continued |           |          |                                |  |                    |                    |                   |
|---|-----------|----------|--------------------------------|--|--------------------|--------------------|-------------------|
| Shot  | Powder    | Primer   | Wad                            | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                    |                    |                   |
| (oz)  |           |          |                                | 1145 fps   | 1200 fps           | 1250 fps           | 1300 fps          |
| 1   | Green Dot | Win 209  | TGT 12 & DRRT12                |  | 19.5 grs 7900 psi  | 21.0 grs 8800 psi  | 22.0 grs 9700 psi |
| 1   | Green Dot | Win 209  | RXP 12                         |  |                    |                    | 21.0 grs 8800 psi |
| 1   | Green Dot | Win 209  | WT 12-Orange                   |  | 19.5 grs 8100 psi  |                    |                   |
| 1   | Green Dot | Win 209  | WAA 12 & DRA12 & DRXL 1 1/8    |  |                    |                    | 20.0 grs 8700 psi |
| 1   | Green Dot | Win 209  | WAA12L & DR XXL (Pink)         | 18.5 grs 7600 psi  | 19.5 grs 8500 psi  |                    |                   |
| 1   | Green Dot | Win 209  | WAA12SL & DRXL-1 & Jammer XL-2 | 18.0 grs 8000 psi  |                    | 21.0 grs 9200 psi  | 21.5 grs 9500 psi |
| 12 Gauge 1 1/8 Ounce Loads                      |           |          |                                |  |                    |                    |                   |
| Shot  | Powder    | Primer   | Wad                            | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                    |                    |                   |
| (oz)  |           |          |                                | 1090 fps   | 1145 fps           | 1200 fps           | 1250 fps          |
| 1 1/8   | Clay Dot  | Win 209  | Figure 8 & DRRF8               |  | 17.0 grs 8570 psi  |                    |                   |
| 1 1/8   | Clay Dot  | Rem 209P | Figure 8 & DRRF8               |  | 17.3 grs 8300 psi  |                    |                   |
| 1 1/8   | Clay Dot  | Win 209  | WAA 12 & DRA12 & DRXL 1 1/8    |  | 17.3 grs 8740 psi  |                    |                   |
| 1 1/8   | Clay Dot  | Rem 209P | WAA 12 & DRA12 & DRXL 1 1/8    |  | 17.0 grs 8520 psi  |                    |                   |
| 1 1/8   | e3        | Win 209  | Figure 8 & DRRF8               | 15.0 grs 8555 psi  | 16.0 grs 9325 psi  | 17.5 grs 10920 psi |                   |
| 1 1/8   | e3        | Win 209  | CB 4118                        | 15.0 grs 9645 psi  | 16.5 grs 9835 psi  | 17.5 grs 10855 psi |                   |
| 1 1/8   | e3        | Win 209  | WAA12SL & DRXL-1 & Jammer XL-1 | 15.0 grs 8645 psi  | 16.0 grs 9625 psi  |                    |                   |
| 1 1/8   | e3        | Win 209  | RXP 12                         | 15.0 grs 8700 psi  | 16.5 grs 9835 psi  |                    |                   |
| 1 1/8   | e3        | Win 209  | CB 0118                        | 15.0 grs 8905 psi  | 16.0 grs 9060 psi  | 17.0 grs 9970 psi  |                   |
| 1 1/8   | e3        | Win 209  | WAA 12 & DRA12 & DRXL 1 1/8    | 15.0 grs 9090 psi  | 16.0 grs 9900 psi  | 17.0 grs 10450 psi |                   |
| 1 1/8   | e3        | Win 209  | Blue Duster                    | 15.0 grs 9015 psi  | 16.0 grs 10265 psi | 17.0 grs 10505 psi |                   |
| 1 1/8   | Red Dot   | CCI 209M | WAA 12 & DRA12 & DRXL 1 1/8    | 17.0 grs 9800 psi  | 17.5 grs 10400 psi | 18.5 grs 10500 psi |                   |
| 1 1/8   | Red Dot   | FIO 616  | WAA 12 & DRA12 & DRXL 1 1/8    | 16.0 grs 8900 psi  | 17.0 grs 10200 psi | 18.0 grs 10500 psi |                   |
| 1 1/8   | Red Dot   | Rem 209P | WAA 12 & DRA12 & DRXL 1 1/8    | 17.0 grs 8100 psi  | 17.5 grs 8700 psi  | 19.0 grs 9500 psi  |                   |
| 1 1/8   | Red Dot   | Win 209  | CB 1100-12                     | 16.0 grs 8000 psi  |                    |                    |                   |
| 1 1/8   | Red Dot   | Win 209  | CB 3118-12                     |  | 16.8 grs 9100 psi  | 18.5 grs 10500 psi |                   |
| 1 1/8   | Red Dot   | Win 209  | Blue Duster                    | 15.5 grs 10300 psi                                       | 16.5 grs 10600 psi | 19.0 grs 10800 psi |                   |
| 1 1/8   | Red Dot   | Win 209  | Versalite                      | 16.5 grs 9000 psi  | 18.0 grs 9500 psi  | 19.0 grs 9700 psi  |                   |
| 1 1/8   | Red Dot   | Win 209  | Red PC                         | 16.0 grs 9100 psi  | 17.5 grs 9500 psi  | 18.5 grs 10300 psi |                   |
| 1 1/8   | Red Dot   | Win 209  | Figure 8 & DRRF8               | 16.0 grs 8300 psi  | 17.5 grs 9900 psi  | 18.5 grs 10700 psi |                   |
| 1 1/8   | Red Dot   | Win 209  | RXP 12                         | 16.5 grs 8400 psi  | 17.0 grs 9000 psi  | 18.5 grs 9800 psi  |                   |

12 Gauge 2 3/4 inch Winchester AA Plastic Shells continued

| 12 Gauge 1 1/8 Ounce Loads continued |                 |          |                                |  |           |          |           |          |           |                    |
|--------------------------------------|-----------------|----------|--------------------------------|--|-----------|----------|-----------|----------|-----------|--------------------|
| Shot                                 | Powder          | Primer   | Wad                            | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |           |          |           |          |           |                    |
| (oz)                                 |                 |          |                                | 1090 fps   |           | 1145 fps |           | 1200 fps |           | 1250 fps           |
| 1 1/8                                | Red Dot         | Win 209  | WAA 12 & DRA12 & DRXL 1 1/8    | 16.0 grs   | 9500 psi  | 17.0 grs | 10000 psi | 18.0 grs | 10400 psi |                    |
| 1 1/8                                | Red Dot         | Win 209  | WAA12SL & DRXL-1 & Jammer XL-1 | 16.0 grs   | 9300 psi  |          |           |          |           |                    |
| 1 1/8                                | Red Dot         | Win 209  | WT 12 Orange                   |  |           | 16.5 grs | 10700 psi | 17.0 grs | 10700 psi |                    |
| 1 1/8                                | Red Dot         | Win 209  | Windjammer                     |  |           | 17.5 grs | 9300 psi  |          |           |                    |
| 1 1/8                                | Red Dot         | Fed 209A | CB 3118-12                     |  |           | 17.0 grs | 9600 psi  | 18.5 grs | 10500 psi |                    |
| 1 1/8                                | Red Dot         | Fed 209A | Versalite                      |  |           | 17.0 grs | 10300 psi | 18.0 grs | 10700 psi |                    |
| 1 1/8                                | Red Dot         | Fed 209A | Red PC                         |  |           | 17.0 grs | 10100 psi | 18.0 grs | 10000 psi |                    |
| 1 1/8                                | Red Dot         | Fed 209A | Figure 8 & DRRF8               |  |           | 17.0 grs | 9800 psi  | 18.5 grs | 10200 psi |                    |
| 1 1/8                                | Red Dot         | Fed 209A | WAA 12 & DRA12 & DRXL 1 1/8    |  |           | 17.0 grs | 10600 psi |          |           |                    |
| 1 1/8                                | Red Dot         | Fed 209A | Windjammer                     |  |           | 17.0 grs | 9000 psi  | 18.0 grs | 10000 psi |                    |
| 1 1/8                                | American Select | Fed 209A | WAA 12 & DRA12 & DRXL 1 1/8    | 17.0 grs   | 8700 psi  | 18.5 grs | 9800 psi  | 19.5 grs | 10800 psi |                    |
| 1 1/8                                | American Select | Rem 209P | WAA 12 & DRA12 & DRXL 1 1/8    | 17.0 grs   | 8000 psi  | 19.0 grs | 8700 psi  | 21.0 grs | 9600 psi  |                    |
| 1 1/8                                | American Select | Rem 209P | Figure 8 & DRRF8               |  |           |          |           |          |           | 22.5 grs 9400 psi  |
| 1 1/8                                | American Select | Win 209  | CB 1100-12                     | 17.0 grs   | 7600 psi  |          |           |          |           |                    |
| 1 1/8                                | American Select | Win 209  | CB 3118-12                     |  |           | 18.5 grs | 9000 psi  | 19.5 grs | 10200 psi | 20.5 grs 10700 psi |
| 1 1/8                                | American Select | Win 209  | Blue Duster                    | 17.0 grs   | 8300 psi  | 18.0 grs | 9000 psi  | 19.5 grs | 10000 psi |                    |
| 1 1/8                                | American Select | Win 209  | Red PC                         | 17.0 grs   | 7300 psi  | 18.5 grs | 8600 psi  | 20.0 grs | 10100 psi | 21.5 grs 10800 psi |
| 1 1/8                                | American Select | Win 209  | Figure 8 & DRRF8               | 17.5 grs   | 8100 psi  | 19.0 grs | 9400 psi  | 20.0 grs | 9800 psi  |                    |
| 1 1/8                                | American Select | Win 209  | RXP 12                         | 17.0 grs   | 9100 psi  | 19.0 grs | 9400 psi  | 20.5 grs | 10700 psi | 21.0 grs 10800 psi |
| 1 1/8                                | American Select | Win 209  | WAA 12 & DRA12 & DRXL 1 1/8    | 17.0 grs   | 9000 psi  | 18.0 grs | 9400 psi  | 19.5 grs | 10300 psi |                    |
| 1 1/8                                | American Select | Win 209  | WAA12SL & DRXL-1 & Jammer XL-1 | 16.8 grs   | 8400 psi  |          |           |          |           |                    |
| 1 1/8                                | American Select | Win 209  | WT 12 Orange                   |  |           | 18.5 grs | 9600 psi  | 19.5 grs | 10700 psi |                    |
| 1 1/8                                | American Select | Win 209  | Windjammer                     |  |           | 18.5 grs | 8100 psi  | 20.5 grs | 9200 psi  |                    |
| 1 1/8                                | Promo           | CCI 209M | WAA 12 & DRA12 & DRXL 1 1/8    | 17.0 grs   | 9800 psi  | 17.5 grs | 10400 psi | 18.5 grs | 10500 psi |                    |
| 1 1/8                                | Promo           | FIO 616  | WAA 12 & DRA12 & DRXL 1 1/8    | 16.0 grs   | 8900 psi  | 17.0 grs | 10200 psi | 18.0 grs | 10500 psi |                    |
| 1 1/8                                | Promo           | Rem 209P | WAA 12 & DRA12 & DRXL 1 1/8    | 17.0 grs   | 8100 psi  | 17.5 grs | 8700 psi  | 19.0 grs | 9500 psi  |                    |
| 1 1/8                                | Promo           | Win 209  | CB 1100-12                     | 16.0 grs   | 8000 psi  |          |           |          |           |                    |
| 1 1/8                                | Promo           | Win 209  | CB 3118-12                     |  |           | 16.8 grs | 9100 psi  | 18.5 grs | 10500 psi |                    |
| 1 1/8                                | Promo           | Win 209  | Blue Duster                    | 15.5 grs   | 10300 psi | 16.5 grs | 10600 psi | 19.0 grs | 10800 psi |                    |
| 1 1/8                                | Promo           | Win 209  | Versalite                      | 16.5 grs   | 9000 psi  | 18.0 grs | 9500 psi  | 19.0 grs | 9700 psi  |                    |

12 Gauge 2 3/4 inch Winchester AA Plastic Shells continued

| 12 Gauge 1 1/8 Ounce Loads continued |           |          |                                |  |          |          |           |          |           |                    |
|--------------------------------------|-----------|----------|--------------------------------|--|----------|----------|-----------|----------|-----------|--------------------|
| Shot                                 | Powder    | Primer   | Wad                            | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |          |          |           |          |           |                    |
| (oz)                                 |           |          |                                | 1090 fps   |          | 1145 fps |           | 1200 fps |           | 1250 fps           |
| 1 1/8                                | Promo     | Win 209  | Red PC                         | 16.0 grs   | 9100 psi | 17.5 grs | 9500 psi  | 18.5 grs | 10300 psi |                    |
| 1 1/8                                | Promo     | Win 209  | Figure 8 & DRRF8               | 16.0 grs   | 8300 psi | 17.5 grs | 9900 psi  | 18.5 grs | 10700 psi |                    |
| 1 1/8                                | Promo     | Win 209  | RXP 12                         | 16.5 grs   | 9000 psi | 17.0 grs | 8400 psi  | 18.5 grs | 9800 psi  |                    |
| 1 1/8                                | Promo     | Win 209  | WAA 12 & DRA12 & DRXL 1 1/8    | 16.0 grs   | 9500 psi | 17.0 grs | 10000 psi | 18.0 grs | 10400 psi |                    |
| 1 1/8                                | Promo     | Win 209  | WAA12SL & DRXL-1 & Jammer XL-1 | 16.0 grs   | 9300 psi |          |           |          |           |                    |
| 1 1/8                                | Promo     | Win 209  | WT 12 Orange                   |  |          | 16.5 grs | 10700 psi | 17.0 grs | 10700 psi |                    |
| 1 1/8                                | Promo     | Win 209  | Windjammer                     |  |          | 17.5 grs | 9300 psi  |          |           |                    |
| 1 1/8                                | Promo     | Fed 209A | CB 3118-12                     |  |          | 17.0 grs | 9600 psi  | 18.5 grs | 10500 psi |                    |
| 1 1/8                                | Promo     | Fed 209A | Versalite                      |  |          | 17.0 grs | 10300 psi | 18.0 grs | 10700 psi |                    |
| 1 1/8                                | Promo     | Fed 209A | Red PC                         |  |          | 17.0 grs | 10100 psi | 18.0 grs | 10000 psi |                    |
| 1 1/8                                | Promo     | Fed 209A | Figure 8 & DRRF8               |  |          | 17.0 grs | 9800 psi  | 18.5 grs | 10200 psi |                    |
| 1 1/8                                | Promo     | Fed 209A | WAA 12 & DRA12 & DRXL 1 1/8    |  |          | 17.0 grs | 10600 psi |          |           |                    |
| 1 1/8                                | Promo     | Fed 209A | Windjammer                     |  |          | 17.0 grs | 9000 psi  | 18.0 grs | 10000 psi |                    |
| 1 1/8                                | Green Dot | Win 209  | CB 1100-12                     | 17.5 grs   | 7800 psi |          |           |          |           |                    |
| 1 1/8                                | Green Dot | Win 209  | CB 3118-12                     |  |          | 19.1 grs | 9300 psi  | 20.0 grs | 9800 psi  |                    |
| 1 1/8                                | Green Dot | Win 209  | Blue Duster                    | 17.5 grs   | 8300 psi | 19.0 grs | 9300 psi  | 20.0 grs | 9400 psi  |                    |
| 1 1/8                                | Green Dot | Win 209  | Versalite                      | 17.5 grs   | 7800 psi | 19.5 grs | 8000 psi  | 21.0 grs | 9000 psi  | 22.0 grs 9900 psi  |
| 1 1/8                                | Green Dot | Win 209  | Red PC                         | 18.0 grs   | 7300 psi | 19.0 grs | 8300 psi  | 20.5 grs | 9800 psi  | 22.0 grs 10300 psi |
| 1 1/8                                | Green Dot | Win 209  | Figure 8 & DRRF8               | 18.0 grs   | 7400 psi | 19.0 grs | 8600 psi  | 20.5 grs | 9500 psi  | 22.0 grs 10300 psi |
| 1 1/8                                | Green Dot | Win 209  | RXP 12                         | 17.5 grs   | 7600 psi | 18.0 grs | 8100 psi  | 19.5 grs | 8900 psi  | 21.0 grs 9500 psi  |
| 1 1/8                                | Green Dot | Win 209  | WAA 12 & DRA12 & DRXL 1 1/8    | 17.5 grs   | 8100 psi | 18.0 grs | 8500 psi  | 19.5 grs | 9300 psi  | 21.5 grs 10500 psi |
| 1 1/8                                | Green Dot | Win 209  | WAA12SL & DRXL-1 & Jammer XL-1 | 18.0 grs   | 8000 psi |          |           |          |           |                    |
| 1 1/8                                | Green Dot | Win 209  | WT 12 Orange                   | 16.5 grs   | 9000 psi | 18.0 grs | 9400 psi  | 20.0 grs | 9200 psi  | 21.5 grs 9800 psi  |
| 1 1/8                                | Green Dot | CCI 209M | WAA 12 & DRA12 & DRXL 1 1/8    |  |          | 18.5 grs | 10100 psi | 20.0 grs | 10400 psi |                    |
| 1 1/8                                | Green Dot | Win 209  | Windjammer                     |  |          | 18.0 grs | 8400 psi  | 21.0 grs | 9000 psi  |                    |
| 1 1/8                                | Green Dot | Fed 209A | CB 3118-12                     |  |          | 18.5 grs | 8400 psi  | 19.5 grs | 9300 psi  |                    |
| 1 1/8                                | Green Dot | Fed 209A | Versalite                      |  |          | 18.5 grs | 9300 psi  | 19.5 grs | 10400 psi |                    |
| 1 1/8                                | Green Dot | Fed 209A | Red PC                         |  |          | 18.5 grs | 8700 psi  | 19.5 grs | 10500 psi |                    |
| 1 1/8                                | Green Dot | Fed 209A | Figure 8 & DRRF8               |  |          | 18.5 grs | 8600 psi  | 19.5 grs | 9400 psi  |                    |
| 1 1/8                                | Green Dot | Fed 209A | WAA 12 & DRA12 & DRXL 1 1/8    |  |          | 18.0 grs | 9300 psi  | 19.0 grs | 10200 psi |                    |
| 1 1/8                                | Green Dot | Fed 209A | Windjammer                     |  |          | 18.5 grs | 8200 psi  | 20.0 grs | 9200 psi  |                    |
| 1 1/8                                | Green Dot | FIO 616  | WAA 12 & DRA12 & DRXL 1 1/8    |  |          | 18.5 grs | 9400 psi  | 20.0 grs | 9500 psi  | 23.5 grs 10100 psi |



12 Gauge 2 3/4 inch Winchester AA Plastic Shells continued

| 12 Gauge 1 1/8 Ounce Loads continued |           |          |                             |  |          |                    |                    |
|--------------------------------------|-----------|----------|-----------------------------|--|----------|--------------------|--------------------|
| Shot                                 | Powder    | Primer   | Wad                         | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |          |                    |                    |
| (oz)                                 |           |          |                             | 1090 fps   | 1145 fps | 1200 fps           | 1250 fps           |
| 1 1/8                                | Green Dot | Rem 209P | WAA 12 &D RA12 & DRXL 1 1/8 |  |          | 20.0 grs 9800 psi  |                    |
| 1 1/8                                | 20/28     | Win 209  | Figure 8                    |  |          | 21.7 grs 6750 psi  | 23.0 grs 7550 psi  |
| 1 1/8                                | 20/28     | CCI 209M | WAA-12                      |  |          | 21.0 grs 7360 ps   | 22.3 grs 7930 psi  |
| 1 1/8                                | 20/28     | CCI 209M | CB 3118-12                  |  |          |                    | 22.3 grs 7340 psi  |
| 1 1/8                                | 20/28     | Win 209  | CB 3118-12                  |  |          |                    | 22.5 grs 6920 psi  |
| 1 1/8                                | 20/28     | Rem 209P | Figure 8                    |  |          | 21.5 grs 6700 psi  | 23.1 grs 7580 psi  |
| 1 1/8                                | 20/28     | CCI 209M | Figure 8                    |  |          | 22.0 grs 6980 psi  | 23.1 grs 7500 psi  |
| 1 1/8                                | 20/28     | Fio 616  | Figure 8                    |  |          |                    | 23.1 grs 7100 psi  |
| 1 1/8                                | Unique    | CCI 209M | WAA 12 & DRA12 & DRXL 1 1/8 |  |          | 21.5 grs 10300 psi |                    |
| 1 1/8                                | Unique    | FIO 616  | WAA 12 & DRA12 & DRXL 1 1/8 |  |          | 21.5 grs 9100 psi  |                    |
| 1 1/8                                | Unique    | Rem 209P | WAA 12 & DRA12 & DRXL 1 1/8 |  |          | 23.0 grs 7500 psi  | 24.0 grs 9300 psi  |
| 1 1/8                                | Unique    | Win 209  | CB 3118-12                  |  |          | 22.5 grs 8800 psi  |                    |
| 1 1/8                                | Unique    | Win 209  | Blue Duster                 |  |          | 22.0 grs 8300 psi  |                    |
| 1 1/8                                | Unique    | Win 209  | Versalite                   |  |          | 21.0 grs 8200 psi  | 24.0 grs 9400 psi  |
| 1 1/8                                | Unique    | Win 209  | Red PC                      |  |          | 23.5 grs 9500 psi  | 24.5 grs 10000 psi |
| 1 1/8                                | Unique    | Win 209  | Figure 8 & DRRF8            |  |          | 22.5 grs 8300 psi  | 24.0 grs 9000 psi  |
| 1 1/8                                | Unique    | Win 209  | RXP 12                      |  |          | 22.0 grs 8700 psi  | 23.0 grs 9200 psi  |
| 1 1/8                                | Unique    | Win 209  | WAA 12 & DRA12 & DRXL 1 1/8 |  |          | 21.0 grs 9100 psi  | 23.5 grs 9400 psi  |
| 1 1/8                                | Unique    | Win 209  | WT 12 Orange                |  |          | 21.5 grs 9000 psi  | 22.5 grs 9500 psi  |
| 1 1/8                                | Unique    | Win 209  | Windjammer                  |  |          | 22.5 grs 8200 psi  |                    |
| 1 1/8                                | Herco     | Win 209  | Versalite                   |  |          |                    | 24.5 grs 9200 psi  |
| 1 1/8                                | Herco     | Win 209  | Red PC                      |  |          |                    | 25.0 grs 9100 psi  |
| 1 1/8                                | Herco     | Win 209  | Figure 8 & DRRF8            |  |          |                    | 25.0 grs 9100 psi  |
| 1 1/8                                | Herco     | Win 209  | RXP 12                      |  |          |                    | 25.0 grs 9200 psi  |
| 1 1/8                                | Herco     | Win 209  | WAA 12 & DRA12 & DRXL 1 1/8 |  |          |                    | 25.0 grs 9500 psi  |
| 1 1/8                                | Herco     | Win 209  | WT 12 Orange                |  |          |                    | 23.5 grs 9400 psi  |
| 12 Gauge 1 1/4 Ounce Loads           |           |          |                             |  |          |                    |                    |
| Shot                                 | Powder    | Primer   | Wad                         | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |          |                    |                    |
| (oz)                                 |           |          |                             | 1350 fps   | 1375 fps | 1400 fps           | 1425 fps           |
| 1 1/4                                | Pro Reach | CCI 209M | CB 1138-12                  |  |          |                    | 30.0 grs 10800 psi |
| 1 1/4                                | Pro Reach | Fed 209A | CB 1138-12                  | 27.5 grs 9650 psi  |          |                    | 29.5 grs 11080 psi |
| 1 1/4                                | Pro Reach | Rem 209P | CB 1138-12                  | 28.1 grs 9770 psi  |          |                    | 30.0 grs 10540 psi |

12 Gauge 2 3/4 Winchester AA Plastic Shells continued

| 12 Gauge 1 1/4 Ounce Loads continued      |           |          |            |  |                    |                    |                    |
|---|-----------|----------|------------|--|--------------------|--------------------|--------------------|
| Shot                                      | Powder    | Primer   | Wad        | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                    |                    |                    |
| (oz)                                      |           |          |            | 1350 fps   | 1375 fps           | 1400 fps           | 1425 fps           |
| 1 1/4                                     | Pro Reach | Win 209  | CB 1138-12 | 28.3 grs 9640 psi  |                    |                    | 31.0 grs 10380 psi |
| 1 1/4                                     | Pro Reach | CCI 209M | WAAF114    |  | 28.9 grs 10190 psi |                    |                    |
| 1 1/4                                     | Pro Reach | Win 209  | WAAF114    | 28.3 grs 9810 psi  |                    |                    |                    |
| 1 1/4                                     | Pro Reach | Cheddite | CB 1138-12 | 27.6 grs 9820 psi  |                    |                    |                    |
| 1 1/4                                     | Pro Reach | Cheddite | WAAF114    | 28.0 grs 9490 psi  |                    |                    |                    |
| 1 1/4                                     | Pro Reach | Win 209  | CB 1138-12 | 28.0 grs 9,950 psi                                       |                    |                    |                    |
| 1 1/4                                     | Pro Reach | Fed 209A | CB 1138-12 |  | 28.0 grs 10010 psi |                    |                    |
| 1 1/4                                     | Pro Reach | CCI 209M | CB 1138-12 | 27.5 grs 10620 psi                                       |                    |                    |                    |
| 1 1/4                                     | Pro Reach | Fed 209A | Fed 12S4   | 27.0 grs 11150 psi                                       |                    |                    |                    |
| 1 1/4                                     | Pro Reach | Rem 209P | CB 1138-12 | 28.1 grs 9720 psi  |                    | 29.5 grs 10540 psi |                    |
| 1 1/4                                     | Pro Reach | Win 209  | RP 12      | 27.7 grs 9780 psi  |                    | 29.0grs 10560 psi  |                    |
| 1 1/4                                     | Pro Reach | Cheddite | WAAF114    | 28.1 grs 10180 psi                                       |                    |                    |                    |
| 1 1/4                                     | Pro Reach | Cheddite | CB 1138-12 | 27.6 fps 9820 psi  |                    |                    |                    |
| 12 Gauge 1 1/4, 1 3/8 & 1 1/2 Ounce Loads |           |          |            |  |                    |                    |                    |
| Shot                                      | Powder    | Primer   | Wad        | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                    |                    |                    |
| (oz)                                      |           |          |            | 1150 fps   | 1200 fps           | 1225 fps           | 1250 fps           |
| 1 1/4                                     | 20/28     | Win 209  | SP 12      |  |                    |                    | 23.3 grs 9180 psi  |
| 1 1/4                                     | 20/28     | Rem 209P | SP 12      |  |                    |                    | 23.4 grs 9010 psi  |
| 1 1/4                                     | 20/28     | CCI 209M | SP 12      |  |                    |                    | 23.2 grs 9720 psi  |
| 1 1/4                                     | Unique    | CCI 209M | WAA12F114  |  |                    | 23.5 grs 9900 psi  |                    |
| 1 1/4                                     | Unique    | Fio 616  | WAA12F114  |  |                    | 23.0 grs 10300 psi |                    |
| 1 1/4                                     | Unique    | Rem 209P | WAA12F114  |  |                    | 24.0 grs 10000 psi |                    |
| 1 1/4                                     | Unique    | Win 209  | Versalite  |  |                    | 24.0 grs 9800 psi  |                    |
| 1 1/4                                     | Unique    | Win 209  | RP 12      |  |                    | 22.5 grs 9500 psi  |                    |
| 1 1/4                                     | Unique    | Win 209  | WAA12F114  |  |                    | 23.5 grs 9900 psi  |                    |
| 1 1/4                                     | Herco     | CCI 209M | WAA12F114  |  |                    | 24.0 grs 9100 psi  |                    |
| 1 1/4                                     | Herco     | Fio 616  | WAA12F114  |  |                    | 25.0 grs 9800 psi  |                    |
| 1 1/4                                     | Herco     | Rem 209P | WAA12F114  |  |                    | 25.5 grs 8300 psi  |                    |
| 1 1/4                                     | Herco     | Win 209  | CB 1138-12 |  |                    | 25.0 grs 9600 psi  |                    |
| 1 1/4                                     | Herco     | Win 209  | Versalite  |  |                    | 25.5 grs 8500 psi  |                    |
| 1 1/4                                     | Herco     | Win 209  | WAA12F114  |  |                    | 25.0 grs 8400 psi  |                    |
| 1 3/8                                     | Blue Dot  | Win 209  | RP 12      |  | 33.0 grs 10400 psi |                    |                    |
| 1 3/8                                     | Blue Dot  | Win 209  | SP 12      |  |                    |                    | 34.5 grs 10300 psi |
| 1 3/8                                     | Pro Reach | CCI 209M | CB 1138-12 |  |                    |                    | 26.2 fps 10910 psi |
| 1 3/8                                     | Pro Reach | Win 209  | RP 12      |  |                    |                    | 25.0 grs 10620 psi |

12 Gauge 2 3/4 Winchester AA Plastic Shells continued

| 12 Gauge 1 1/4, 1 3/8 & 1 1/2 Ounce Loads continued            |                 |          |                                |  |                    |                    |                    |
|--|-----------------|----------|--------------------------------|--|--------------------|--------------------|--------------------|
| Shot   | Powder          | Primer   | Wad                            | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                    |                    |                    |
| (oz)   |                 |          |                                | 1150 fps   | 1200 fps           | 1225 fps           | 1250 fps           |
| 1 3/8  | Pro Reach       | Win 209  | CB 1138-12                     |  |                    |                    | 26.1 fps 10520 psi |
| 1 3/8  | Pro Reach       | Fed 209A | CB 1138-12                     |  |                    | 24.5 grs 10740 psi |                    |
| 1 3/8  | Pro Reach       | Rem 209P | CB 1138-12                     |  |                    |                    | 26.0 grs 10460 psi |
| 1 3/8  | Pro Reach       | Fed 209A | RP 12                          |  | 23.8 grs 10760 psi |                    |                    |
| 1 3/8  | Pro Reach       | CCI 209M | CB 1138-12                     |  |                    |                    | 26.5 grs 10580 psi |
| 1 1/2  | Blue Dot        | Win 209  | RP 12                          | 30.5 grs 10800 psi                                       |                    |                    |                    |
| 1 1/2  | Blue Dot        | Win 209  | WAA12R                         | 31.0 grs 10400 psi                                       |                    |                    |                    |
| 1 1/2  | Blue Dot        | Win 209  | CB 1138-12                     |  | 33.7 grs 10100 psi |                    |                    |
| 12 GAUGE 2 3/4 INCH FEDERAL® GOLD MEDAL® PLASTIC TARGET SHELLS |                 |          |                                |  |                    |                    |                    |
| 12 Gauge 7/8 and 1 Ounce Target Loads                          |                 |          |                                |  |                    |                    |                    |
| Shot   | Powder          | Primer   | Wad                            | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                    |                    |                    |
| (oz)   |                 |          |                                | 1200 fps   | 1250 fps           | 1290 fps           |                    |
| 7/8  | Clay Dot        | Fed 209A | 12SO & DRXXL Orange            | 17.5 grs 6042 psi  | 18.0 grs 6530 psi  | 19.0 grs 7310 psi  |                    |
| 7/8  | Clay Dot        | Fed 209A | CB 0178                        | 18.0 grs 5804 psi  | 18.5 grs 6040 psi  | 19.5 grs 9110 psi  |                    |
| 7/8  | Clay Dot        | Fed 209A | CB 4100-12                     | 18.0 grs 5744 psi  | 18.5 grs 6112 psi  | 19.0 grs 7780 psi  |                    |
| 7/8  | e3              | Fed 209A | 12SO & DRXXL Orange            | 16.5 grs 6905 psi  | 17.5 grs 8095 psi  | 18.5 grs 8855 psi  |                    |
| 7/8  | e3              | Fed 209A | TGT 12 & DRRT12                |  | 17.0 grs 7095 psi  | 18.0 grs 7925 psi  |                    |
| 7/8  | Red Dot         | Fed 209A | CB 1100-12                     |  |                    |                    |                    |
| 7/8  | Red Dot         | Fed 209A | Purple PC                      | 17.0 grs 6400 psi  | 18.5 grs 7300 psi  | 19.5 grs 7900 psi  |                    |
| 7/8  | Red Dot         | Fed 209A | TGT 12 & DRRT12                | 17.5 grs 7100 psi  | 18.5 grs 7800 psi  | 19.5 grs 8500 psi  |                    |
| 7/8  | Red Dot         | Fed 209A | WAA12SL & DRXL-1 & Jammer XL-1 | 17.0 grs 7300 psi  | 18.0 grs 8000 psi  | 19.0 grs 8400 psi  |                    |
| 7/8  | Red Dot         | Fed 209A | WAA 12L (Gray)                 |  |                    |                    |                    |
| 7/8  | Red Dot         | Fed 209A | 12SO & DRXXL Orange            |  | 19.0 grs 7900 psi  | 19.5 grs 8400 psi  |                    |
| 7/8  | American Select | Fed 209A | CB 1100-12                     |  |                    | 21.5 grs 6900 psi  |                    |
| 7/8  | American Select | Fed 209A | 12SO & DRXXL Orange            |  |                    | 21.0 grs 7300 psi  |                    |
| 7/8  | American Select | Fed 209A | Purple PC                      |  |                    | 21.5 grs 6900 psi  |                    |
| 7/8  | American Select | Fed 209A | TGT 12 & DRRT12                |  |                    | 21.0 grs 7400 psi  |                    |
| 7/8  | Green Dot       | Fed 209A | 12SO & DRXXL Orange            |  |                    | 22.0 grs 7500 psi  |                    |

12 Gauge 2 3/4 inch Federal Gold Medal Plastic Target Shells continued

| 12 Gauge 7/8 and 1 Ounce Target Loads continued |                 |             |                                |  |                   |                    |  |
|---|-----------------|-------------|--------------------------------|--|-------------------|--------------------|--|
| Shot  | Powder          | Primer      | Wad                            | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                   |                    |  |
| (oz)  |                 |             |                                | 1200 fps   | 1250 fps          | 1290 fps           |  |
| 7/8   | Green Dot       | Fed 209A    | Purple PC                      |  |                   | 22.5 grs 7000 psi  |  |
| 7/8   | Green Dot       | Fed 209A    | TGT 12 & DRRT12                |  |                   | 22.0 grs 7200 psi  |  |
| 7/8   | Green Dot       | Fed 209A    | WAA12SL & DRXL-1 & Jammer XL-1 |  |                   | 21.5 grs 7600 psi  |  |
| 7/8   | Promo           | Fed 209A    | Purple PC                      | 17.0 grs 6400 psi  | 18.5 grs 7300 psi | 19.5 grs 7900 psi  |  |
| 7/8   | Promo           | Fed 209A    | TGT 12 & DRRT12                | 17.5 grs 7100 psi  | 18.5 grs 7800 psi | 19.5 grs 8500 psi  |  |
| 7/8   | Promo           | Fed 209A    | WAA12SL & DRXL-1 & Jammer XL-1 | 17.0 grs 7300 psi  | 18.0 grs 8000 psi | 19.0 grs 8400 psi  |  |
| 7/8   | Promo           | Fed 209A    | 12SO & DRXXL Orange            |  | 19.0 grs 7900 psi | 19.5 grs 8400 psi  |  |
| 1   | Clay Dot        | Fed 209A    | 12SO                           | 17.9 grs 5870 psi  | 19.2 grs 6600 psi |                    |  |
| 1   | Clay Dot        | Fed 209A    | DRXXL Orange                   | 18.0 grs 8820 psi  |                   |                    |  |
| 1   | Clay Dot        | CCI 209     | DRXXL Orange                   | 18.0 grs 6770 psi  |                   |                    |  |
| 1   | Clay Dot        | Win 209     | DRXXL Orange                   | 18.0 grs 7460 psi  |                   |                    |  |
| 1   | Clay Dot        | RIO         | DRXXL Orange                   | 18.0 grs 6610 psi  |                   |                    |  |
| 1   | Clay Dot        | Cheddite    | DRXXL Orange                   | 18.0 grs 7370 psi  |                   |                    |  |
| 1   | Clay Dot        | Fiocchi 616 | DRXXL Orange                   | 18.0 grs 7490 psi  |                   |                    |  |
| 1   | Clay Dot        | Rem 209P    | DRXXL Orange                   | 18.0 grs 7930 psi  |                   |                    |  |
| 1   | Clay Dot        | CCI 209M    | DRXXL Orange                   | 18.0 grs 8690 psi  |                   |                    |  |
| 1   | Clay Dot        | Rem 209P    | TGT 12 & DRRT12                | 19.2 grs 6450 psi  | 20.2 grs 7320 psi |                    |  |
| 1   | Clay Dot        | Win 209     | WAA12SL & DRXL-1 & Jammer XL-1 | 18.2 grs 5910 psi  | 19.1 grs 6730 psi |                    |  |
| 1   | Clay Dot        | Fed 209A    | CB 6100-12                     | 18.0 grs 6040 psi  | 19.0 grs 7170 psi | 20.0 grs 7970 psi  |  |
| 1   | Clay Dot        | CCI 209     | CB 6100-12                     | 17.5 grs 5960 psi  |                   |                    |  |
| 1   | American Select | Fed 209A    | CB 6100-12                     | 19.0 grs 5910 psi  | 20.5 grs 6790 psi | 21.5 grs 7290 psi  |  |
| 1   | American Select | CCI 209     | CB 6100-12                     | 19.5 grs 5790 psi  |                   |                    |  |
| 1   | Green Dot       | Fed 209A    | CB 6100-12                     | 19.5 grs 5980 psi  | 20.5 grs 6860 psi | 22.0 grs 7230 psi  |  |
| 1   | e3              | Fed 209A    | Green Duster                   | 16.5 grs 8310 psi  | 18.0 grs 9710 psi | 18.5 grs 10035 psi |  |
| 1   | e3              | Fed 209A    | TGT 12 & DRRT12                | 17.0 grs 8000 psi  | 18.0 grs 8840 psi | 19.0 grs 9660 psi  |  |
| 1   | e3              | Fed 209A    | 12SO & DRXXL Orange            | 17.5 grs 9040 psi  | 18.5 grs 9340 psi | 19.5 grs 10070 psi |  |
| 1   | e3              | Fed 209A    | CB 6100-12                     | 16.5 grs 6780 psi  |                   |                    |  |
| 1   | e3              | CCI 209     | CB 6100-12                     | 16.5 grs 6290 psi  | 18.0 grs 7270 psi | 18.5 grs 7470 psi  |  |
| 1   | Red Dot         | Fed 209A    | 12SO & DRXXL Orange            | 18.0 grs 8300 psi  | 19.5 grs 9300 psi | 20.5 grs 10300 psi |  |
| 1   | Red Dot         | Fed 209A    | Purple PC                      | 18.0 grs 7400 psi  | 19.5 grs 8700 psi | 20.5 grs 9300 psi  |  |
| 1   | Red Dot         | Fed 209A    | TGT 12 & DRRT12                | 18.0 grs 7900 psi  | 19.0 grs 8700 psi | 20.0 grs 9100 psi  |  |

12 Gauge 2 3/4 inch Federal Gold Medal Plastic Target Shells continued

| 12 Gauge 7/8 and 1 Ounce Target Loads continued |                 |          |                                |  |                   |          |          |                    |
|---|-----------------|----------|--------------------------------|--|-------------------|----------|----------|--------------------|
| Shot  | Powder          | Primer   | Wad                            | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                   |          |          |                    |
| (oz)  |                 |          |                                | 1200 fps   |                   | 1250 fps |          | 1290 fps           |
| 1   | Red Dot         | Fed 209A | WAA12SL & DRXL-1 & Jammer XL-1 | 18.0 grs   | 8700 psi          | 18.5 grs | 9100 psi | 20.0 grs 10300 psi |
| 1   | Red Dot         | CCI 209  | CB 6100-12                     | 18.0 grs   | 6430 psi          |          |          |                    |
| 1   | Red Dot         | Fed 209A | CB 6100-12                     | 18.0 grs   | 6550 psi          | 19.0 grs | 6790 psi | 20.0 grs 7910 psi  |
| 1   | American Select | Fed 209A | CB 1100-12                     | 20.0 grs   | 7300 psi          | 21.0 grs | 7600 psi | 21.5 grs 8000 psi  |
| 1   | American Select | Fed 209A | 12SO & DRXXL Orange            | 19.5 grs   | 7100 psi          | 21.0 grs | 7700 psi | 22.0 grs 8500 psi  |
| 1   | American Select | Fed 209A | TGT 12 & DRRT12                | 19.5 grs   | 7500 psi          | 20.5 grs | 8100 psi | 21.5 grs 8800 psi  |
| 1   | American Select | Fed 209A | WAA12SL & DRXL-1 & Jammer XL-1 | 19.5 grs   | 7200 psi          | 21.0 grs | 8400 psi | 21.5 grs 8800 psi  |
| 1   | Green Dot       | Fed 209A | 12SO & DRXXL Orange            | 20.5 grs   | 7600 psi          | 21.5 grs | 8600 psi | 22.5 grs 8700 psi  |
| 1   | Green Dot       | Fed 209A | Purple PC                      | 20.5 grs   | 7300 psi          | 21.5 grs | 8000 psi | 22.5 grs 8300 psi  |
| 1   | Green Dot       | Fed 209A | TGT 12 & DRRT12                | 20.0 grs   | 7000 psi          | 21.5 grs | 7900 psi | 22.5 grs 8500 psi  |
| 1   | Green Dot       | Fed 209A | WAA12SL & DRXL-1 & Jammer XL-1 | 20.0 grs   | 7800 psi          | 21.5 grs | 8500 psi | 22.5 grs 9000 psi  |
| 1   | Green Dot       | CCI 209  | CB 6100-12                     | 19.5 grs   | 6190 psi          |          |          |                    |
| 1   | Promo           | Fed 209A | 12SO & DRXXL Orange            | 18.0 grs   | 8300 psi          | 19.5 grs | 9300 psi | 20.5 grs 10300 psi |
| 1   | Promo           | Fed 209A | Purple PC                      | 18.0 grs   | 7400 psi          | 19.5 grs | 8700 psi | 20.5 grs 9300 psi  |
| 1   | Promo           | Fed 209A | TGT 12 & DRRT12                | 18.0 grs   | 7900 psi          | 19.0 grs | 8700 psi | 20.0 grs 9100 psi  |
| 1   | Promo           | Fed 209A | WAA12SL&DRXL-1&Jammer XL-1     | 18.0 grs   | 8700 psi          | 18.5 grs | 9100 psi | 20.0 grs 10300 psi |
| 12 Gauge 1 1/8 Ounce Loads                      |                 |          |                                |  |                   |          |          |                    |
| Shot  | Powder          | Primer   | Wad                            | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                   |          |          |                    |
|   |                 |          |                                | 1090 fps   |                   | 1145 fps |          | 1200 fps 1250 fps  |
| 1 1/8   | Clay Dot        | Fed 209A | 12S3 & DRF3                    |  | 17.1 grs 7590 psi | 19.0 grs | 8750 psi |                    |
| 1 1/8   | Clay Dot        | Fed 209A | WAA12                          |  | 17.0 grs 7680 psi | 18.5 grs | 8970 psi |                    |
| 1 1/8   | Clay Dot        | Rem 209P | Figure 8 & DRRF8               |  | 17.8 grs 6640 psi |          |          | 18.9 grs 9870 psi  |
| 1 1/8   | Clay Dot        | Fed 209A | CB 6118-12                     | 16.5 grs   | 6710 psi          | 18.0 grs | 7870 psi | 19.0 grs 9540 psi  |
| 1 1/8   | e3              | Fed 209A | CB 6118-12                     | 15.0 grs   | 7070 psi          | 16.5 grs | 8100 psi | 17.5 grs 8940 psi  |
| 1 1/8   | e3              | Fed 209A | CB 3118-12AR                   | 15.5 grs   | 8210 psi          | 16.5 grs | 8960 psi | 17.8 grs 9990 psi  |
| 1 1/8   | e3              | Fed 209A | CB 4118                        | 15.5 grs   | 7860 psi          | 16.5 grs | 8365 psi | 18.0 grs 9525 psi  |
| 1 1/8   | e3              | Fed 209A | Figure 8 & DRRF8               | 15.5 grs   | 7930 psi          | 17.0 grs | 8875 psi | 18.0 grs 9900 psi  |
| 1 1/8   | e3              | Fed 209A | WAA 12 & DRA12 & DRXL 1 1/8    | 15.5 grs   | 8290 psi          | 16.5 grs | 8980 psi | 18.0 grs 10470 psi |
| 1 1/8   | e3              | Fed 209A | WAA12SL & DRXL-1 & Jammer XL-1 | 15.5 grs   | 8485 psi          | 16.5 grs | 9215 psi | 18.0 grs 10755 psi |
| 1 1/8   | e3              | Fed 209A | 12S3 & DRF3 & DRXXL Orange     | 15.5 grs   | 8580 psi          | 17.0 grs | 9260 psi | 18.0 grs 10660 psi |

12 Gauge 2 3/4 inch Federal Gold Medal Plastic Target Shells continued

| 12 Gauge 1 1/8 Ounce Loads continued |                 |          |                                |  |          |          |          |                                       |
|--------------------------------------|-----------------|----------|--------------------------------|--|----------|----------|----------|---------------------------------------|
| Shot                                 | Powder          | Primer   | Wad                            | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |          |          |          |                                       |
|                                      |                 |          |                                | 1090 fps   |          | 1145 fps |          | 1200 fps 1250 fps                     |
| 1 1/8                                | e3              | Fed 209A | Blue Duster                    | 15.5 grs   | 8655 psi | 16.5 grs | 9520 psi | 18.0 grs 10550 psi                    |
| 1 1/8                                | American Select | Fed 209A | CB 6118-12                     | 18.5 grs   | 5330 psi | 20.0 grs | 6110 psi | 20.5 grs 7640 psi                     |
| 1 1/8                                | American Select | Fed 209A | CB 3118-12                     | 17.5 grs   | 7100 psi | 19.0 grs | 8200 psi | 20.5 grs 9600 psi 22.0 grs 10600 psi  |
| 1 1/8                                | American Select | Fed 209A | 12S3 & DRF3                    | 17.5 grs   | 7100 psi | 19.0 grs | 7600 psi | 20.5 grs 9200 psi 22.0 grs 10100 psi  |
| 1 1/8                                | American Select | Fed 209A | Versalite                      | 17.0 grs   | 8100 psi | 18.5 grs | 9600 psi | 20.0 grs 10900 psi 21.0 grs 10900 psi |
| 1 1/8                                | American Select | Fed 209A | Figure 8 & DRRF8               | 17.5 grs   | 8000 psi | 19.0 grs | 9000 psi | 20.0 grs 10300 psi                    |
| 1 1/8                                | American Select | Fed 209A | WAA 12 & DRA12 & DRXL1 1/8     | 17.5 grs   | 7400 psi | 19.0 grs | 9600 psi | 20.5 grs 9400 psi                     |
| 1 1/8                                | American Select | Fed 209A | WT 12 (Orange)                 | 18.0 grs   | 7700 psi | 19.0 grs | 9300 psi | 20.5 grs 10400 psi                    |
| 1 1/8                                | American Select | Fed 209A | Windjammer                     |  |          | 19.0 grs | 8700 psi | 20.5 grs 9800 psi 21.5 grs 10700 psi  |
| 1 1/8                                | American Select | Rem 209P | 12S3 & DRF3                    |  |          | 19.5 grs | 7800 psi | 21.5 grs 9000 psi                     |
| 1 1/8                                | American Select | Win 209  | 12S3 & DRF3                    |  |          | 19.5 grs | 8100 psi | 20.5 grs 9900 psi                     |
| 1 1/8                                | Red Dot         | Fed 209A | CB 6118-12                     | 16.5 grs   | 7290 psi | 17.5 grs | 8140 psi | 18.5 grs 8690 psi                     |
| 1 1/8                                | Red Dot         | CCI 209  | 12S3 & DRF3                    |  |          | 18.0 grs | 8200 psi | 20.0 grs 9800 psi                     |
| 1 1/8                                | Red Dot         | CCI 209M | 12S3 & DRF3                    | 17.0 grs   | 8300 psi | 18.0 grs | 8600 psi | 19.0 grs 8900 psi                     |
| 1 1/8                                | Red Dot         | Fed 209A | 12S3 & DRF3                    | 17.0 grs   | 8400 psi | 18.0 grs | 8800 psi | 19.5 grs 10000 psi                    |
| 1 1/8                                | Red Dot         | Fed 209A | Versalite                      | 17.0 grs   | 8600 psi | 18.0 grs | 9400 psi | 19.0 grs 10100 psi 20.0 grs 10700 psi |
| 1 1/8                                | Red Dot         | Fed 209A | Figure 8 & DRRF8               | 17.0 grs   | 7700 psi | 18.0 grs | 8800 psi | 19.0 grs 9500 psi 20.0 grs 9500 psi   |
| 1 1/8                                | Red Dot         | Fed 209A | RXP 12                         |  |          | 18.0 grs | 9400 psi | 19.0 grs 9900 psi 20.0 grs 10100 psi  |
| 1 1/8                                | Red Dot         | Fed 209A | WAA 12 & DRA12 & DRXL 1 1/8    | 16.5 grs   | 8500 psi | 17.5 grs | 9400 psi | 19.0 grs 10400 psi                    |
| 1 1/8                                | Red Dot         | Fed 209A | WAA12SL & DRXL-1 & Jammer XL-1 | 17.0 grs   | 8100 psi | 18.0 grs | 9200 psi | 19.0 grs 10000 psi                    |
| 1 1/8                                | Red Dot         | Fed 209A | WT 12 (Orange)                 |  |          | 18.5 grs | 9300 psi | 20.0 grs 10400 psi                    |
| 1 1/8                                | Red Dot         | Fed 209A | Windjammer                     | 17.5 grs   | 7600 psi | 18.5 grs | 8200 psi | 19.5 grs 9600 psi 20.5 grs 9500 psi   |
| 1 1/8                                | Red Dot         | FIO 616  | 12S3 & DRF3                    | 17.5 grs   | 8200 psi |          |          |                                       |
| 1 1/8                                | Red Dot         | Win 209  | 12S3 & DRF3                    | 17.0 grs   | 8400 psi | 17.5 grs | 9600 psi | 19.0 grs 10500 psi                    |
| 1 1/8                                | Red Dot         | Rem 209P | 12S3 & DRF3                    |  |          | 18.5 grs | 8200 psi | 19.5 grs 9300 psi                     |
| 1 1/8                                | Green Dot       | Fed 209A | CB 6118-12                     | 18.0 grs   | 6900 psi | 19.5 grs | 7220 psi | 20.5 grs 7800 psi                     |
| 1 1/8                                | Green Dot       | Fed 209A | 12S3 & DRF3                    | 18.5 grs   | 7800 psi | 19.5 grs | 8100 psi | 20.0 grs 9000 psi 21.5 grs 9500 psi   |
| 1 1/8                                | Green Dot       | Fed 209A | Versalite                      | 18.0 grs   | 7200 psi | 19.0 grs | 8000 psi | 20.5 grs 9400 psi 21.5 grs 9000 psi   |



12 Gauge 2 3/4 inch Federal Gold Medal Plastic Target Shells continued

| 12 Gauge 1 1/8 Ounce Loads continued |           |          |                                |  |                   |                   |                    |
|--------------------------------------|-----------|----------|--------------------------------|--|-------------------|-------------------|--------------------|
| Shot                                 | Powder    | Primer   | Wad                            | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                   |                   |                    |
|                                      |           |          |                                | 1090 fps   | 1145 fps          | 1200 fps          | 1250 fps           |
| 1 1/8                                | Green Dot | Fed 209A | Figure 8 & DRRF8               | 18.0 grs 7000 psi  | 19.0 grs 7700 psi | 20.0 grs 8600 psi | 22.0 grs 9200 psi  |
| 1 1/8                                | Green Dot | Fed 209A | RXP 12                         |  | 19.0 grs 8000 psi | 20.0 grs 8800 psi | 21.5 grs 9700 psi  |
| 1 1/8                                | Green Dot | Fed 209A | WAA 12 & DRA12 & DRXL 1 1/8    | 18.0 grs 7700 psi  | 19.0 grs 8200 psi | 20.0 grs 9200 psi | 21.5 grs 9400 psi  |
| 1 1/8                                | Green Dot | Fed 209A | WAA12SL & DRXL-1 & Jammer XL-1 | 18.0 grs 7600 psi  | 19.0 grs 8200 psi | 20.0 grs 8800 psi |                    |
| 1 1/8                                | Green Dot | Fed 209A | WT 12 (Orange)                 |  | 20.0 grs 8400 psi | 21.5 grs 8800 psi |                    |
| 1 1/8                                | Green Dot | Fed 209A | Windjammer                     | 18.5 grs 6600 psi  | 19.5 grs 7700 psi | 21.0 grs 8200 psi | 22.5 grs 8400 psi  |
| 1 1/8                                | Green Dot | CCI 209  | 12S3 & DRF3                    |  | 19.0 grs 7800 psi | 22.0 grs 9200 psi |                    |
| 1 1/8                                | Green Dot | CCI 209M | 12S3 & DRF3                    |  | 19.5 grs 7500 psi | 21.0 grs 8600 psi | 22.5 grs 9800 psi  |
| 1 1/8                                | Green Dot | Win 209  | 12S3 & DRF3                    |  | 19.5 grs 8000 psi | 20.5 grs 9000 psi | 22.5 grs 10500 psi |
| 1 1/8                                | Green Dot | Rem 209P | 12S3 & DRF3                    |  | 20.5 grs 6800 psi | 21.5 grs 7900 psi | 23.0 grs 8800 psi  |
| 1 1/8                                | Unique    | CCI 209  | 12S3 & DRF3                    |  |                   | 24.0 grs 8300 psi |                    |
| 1 1/8                                | Unique    | CCI 209M | 12S3 & DRF3                    |  |                   | 23.5 grs 8000 psi | 24.0 grs 9100 psi  |
| 1 1/8                                | Unique    | Fed 209A | 12S3 & DRF3                    |  |                   | 22.5 grs 7300 psi | 23.5 grs 8100 psi  |
| 1 1/8                                | Unique    | Fed 209A | Versalite                      |  |                   | 22.0 grs 8000 psi | 24.0 grs 8300 psi  |
| 1 1/8                                | Unique    | Fed 209A | Figure 8 & DRRF8               |  |                   | 22.5 grs 7300 psi | 23.5 grs 7800 psi  |
| 1 1/8                                | Unique    | Fed 209A | RXP 12                         |  |                   | 22.5 grs 7800 psi | 23.5 grs 8400 psi  |
| 1 1/8                                | Unique    | Fed 209A | WAA 12 & DRA12 & DRXL 1 1/8    |  |                   | 22.5 grs 8100 psi | 23.0 grs 8400 psi  |
| 1 1/8                                | Unique    | Fed 209A | WT 12 (Orange)                 |  |                   | 23.5 grs 8300 psi |                    |
| 1 1/8                                | Unique    | Fed 209A | Windjammer                     |  |                   | 22.5 grs 6900 psi | 24.0 grs 7700 psi  |
| 1 1/8                                | Unique    | Win 209  | 12S3 & DRF3                    |  |                   | 23.0 grs 8600 psi | 24.0 grs 9800 psi  |
| 1 1/8                                | Unique    | Rem 209P | 12S3 & DRF3                    |  |                   | 24.0 grs 6900 psi | 25.0 grs 7600 psi  |
| 1 1/8                                | Herco     | Fed 209A | 12S3 & DRF3                    |  |                   |                   | 26.0 grs 8000 psi  |
| 12 Gauge 1 1/8 Ounce Loads continued |           |          |                                |  |                   |                   |                    |
| Shot                                 | Powder    | Primer   | Wad                            | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                   |                   |                    |
|                                      |           |          |                                | 1250 fps   | 1350 fps          | 1450 fps          | 1550 fps           |
| 1 1/8                                | Herco     | Fed 209A | Versalite                      | 26.0 grs 8200 psi  |                   |                   |                    |
| 1 1/8                                | Herco     | Fed 209A | Figure 8 & DRRF8               | 26.0 grs 7700 psi  |                   |                   |                    |
| 1 1/8                                | Herco     | Fed 209A | RXP 12                         | 26.0 grs 8000 psi  |                   |                   |                    |
| 1 1/8                                | Herco     | Fed 209A | WAA 12 & DRA12 & DRXL 1 1/8    | 26.0 grs 8300 psi  |                   |                   |                    |
| 1 1/8                                | Herco     | Fed 209A | Windjammer                     | 26.0 grs 7400 psi  |                   |                   |                    |
| 1 1/8                                | Pro Reach | CCI-209M | Fed 12S3                       |  |                   |                   | 35.2 grs 10330 psi |
| 1 1/8                                | Pro Reach | Rem 209P | Fed 12S3                       |  |                   |                   | 35.0 grs 10270 psi |

12 Gauge 2 3/4 inch Federal Gold Medal Plastic Target Shells continued

| 12 Gauge 1 1/4 Ounce Loads         |           |          |            |  |                    |                     |                    |
|------------------------------------|-----------|----------|------------|--|--------------------|---------------------|--------------------|
| Shot                               | Powder    | Primer   | Wad        | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                    |                     |                    |
|                                    |           |          |            | 1200 fps   | 1225 fps           | 1425 fps            | 1450 fps           |
| 1 1/4                              | Pro Reach | CCI 209M | 12S4       |  |                    | 30.5 grs 10,860 psi |                    |
| 1 1/4                              | Pro Reach | CCI 209M | WAA 12F114 |  |                    |                     | 32.5 grs 11120 psi |
| 1 1/4                              | Pro Reach | Fed 209A | WAA 12F114 |  |                    | 30.5 grs 11,190 psi |                    |
| 1 1/4                              | Pro Reach | Fed 209A | 12S4       |  |                    | 30.0 grs 11,010 psi |                    |
| 1 1/4                              | Unique    | CCI 209M | 12S4       |  | 24.5 grs 9500 psi  |                     |                    |
| 1 1/4                              | Unique    | Fed 209A | 12S4       |  | 24.0 grs 10500 psi |                     |                    |
| 1 1/4                              | Unique    | Fed 209A | SP 12      |  | 24.0 grs 10400 psi |                     |                    |
| 1 1/4                              | Unique    | Fed 209A | WAA 12F114 |  | 24.0 grs 10600 psi |                     |                    |
| 1 1/4                              | Unique    | Win 209  | 12S4       |  | 24.0 grs 9500 psi  |                     |                    |
| 1 1/4                              | Unique    | Rem 209P | 12S4       |  | 25.0 grs 9800 psi  |                     |                    |
| 1 1/4                              | Herco     | CCI 209M | 12S4       |  | 25.5 grs 8700 psi  |                     |                    |
| 1 1/4                              | Herco     | Fed 209A | 12S4       |  | 25.0 grs 10200 psi |                     |                    |
| 1 1/4                              | Herco     | Fed 209A | SP 12      |  | 26.0 grs 9700 psi  |                     |                    |
| 1 1/4                              | Herco     | Fed 209A | WAA 12F114 |  | 25.0 grs 10100 psi |                     |                    |
| 1 1/4                              | Herco     | Win 209  | 12S4       |  | 25.5 grs 9400 psi  |                     |                    |
| 1 1/4                              | Herco     | Rem 209P | 12S4       |  | 25.5 grs 8100 psi  |                     |                    |
| 1 1/4                              | Blue Dot  | CCI 209M | RP 12      | 34.0 grs 9400 psi  |                    |                     |                    |
| 1 1/4                              | Blue Dot  | Fed 209A | RP 12      | 34.0 grs 9700 psi  |                    |                     |                    |
| 1 1/4                              | Blue Dot  | CCI 209M | RP 12      | 35.5 grs 8100 psi  |                    |                     |                    |
| 1 1/4                              | Blue Dot  | Fed 209A | RP 12      | 34.5 grs 9900 psi  |                    |                     |                    |
| 12 Gauge 1 3/8 & 1 1/2 Ounce Loads |           |          |            |  |                    |                     |                    |
| Shot                               | Powder    | Primer   | Wad        | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                    |                     |                    |
|                                    |           |          |            | 1150 fps   | 1200 fps           | 1225 fps            | 1250 fps           |
| 1 3/8                              | Blue Dot  | CCI 209M | RP 12      |  |                    |                     | 35.0 grs 8600 psi  |
| 1 3/8                              | Blue Dot  | Fed 209A | RP 12      |  |                    |                     | 34.0 grs 9900 psi  |
| 1 3/8                              | Blue Dot  | Rem 209P | RP 12      |  |                    |                     | 36.0 grs 7800 psi  |
| 1 3/8                              | Blue Dot  | Win 209  | RP 12      |  |                    |                     | 34.5 grs 8600 psi  |
| 1 1/2                              | Herco     | Fed 209A | RP 12      | 25.5 grs 10100 psi                                       |                    |                     |                    |
| 1 1/2                              | Blue Dot  | Fed 209A | RP 12      | 33.5 grs 8300 psi  |                    |                     |                    |

| 12 GAUGE 2 3/4 INCH FEDERAL® GOLD MEDAL® PAPER TARGET SHELLS |                 |          |                                |  |                    |                    |                    |  |
|--|-----------------|----------|--------------------------------|--|--------------------|--------------------|--------------------|--|
| 12 Gauge 7/8 and 1 Ounce Target Loads                        |                 |          |                                |  |                    |                    |                    |  |
| Shot   | Powder          | Primer   | Wad                            | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                    |                    |                    |  |
| (oz)   |                 |          |                                | 1200 fps   | 1250 fps           | 1300 fps           |                    |  |
| 7/8  | Red Dot         | Fed 209A | CB 0178                        | 17.5 grs 6028 psi  | 18.5 grs 6570 psi  | 19.5 grs 7196 psi  |                    |  |
| 7/8  | Clay Dot        | Fed 209A | 12SO & DRXXL Orange            | 17.5 grs 6400 psi  | 18.5 grs 6900 psi  | 19.5 grs 7390 psi  |                    |  |
| 7/8  | e3              | Fed 209A | CB 4100-12B                    | 16.5 grs 6280 psi  | 17.5 grs 7075 psi  | 18.5 grs 7400 psi  |                    |  |
| 7/8  | e3              | Fed 209A | WAA12SL & DRXL-1 & Jammer XL-1 | 16.5 grs 6960 psi  | 17.5 grs 7345 psi  | 18.5 grs 8230 psi  |                    |  |
| 1  | Clay Dot        | Fed 209A | 12SO & DRXXL Orange            | 18.0 grs 6770 psi  | 19.5 grs 8580 psi  |                    |                    |  |
| 1  | Clay Dot        | Fed 209A | CB 6100-12                     | 18.5 grs 8610 psi  | 19.5 grs 8240 psi  | 20.5 grs 9210 psi  |                    |  |
| 1  | e3              | Fed 209A | 12SO & DRXXL Orange            | 17.5 grs 8535 psi  | 18.5 grs 10065 psi | 19.5 grs 10630 psi |                    |  |
| 1  | e3              | Fed 209A | CB 6100-12                     | 17.0 grs 7520 psi  | 18.0 grs 7960 psi  | 19.0 grs 8820 psi  |                    |  |
| 1  | Red Dot         | CCI 209M | 12S3 & DRF3                    |  |                    | 21.0 grs 8700 psi  |                    |  |
| 1  | Red Dot         | Fed 209A | 12S3 & DRF3                    |  |                    | 20.5 grs 9000 psi  |                    |  |
| 1  | Red Dot         | Fed 209A | CB 6100-12                     | 18.0 grs 7680 psi  | 19.0 grs 8410 psi  | 20.5 grs 8730 psi  |                    |  |
| 1  | Red Dot         | Fed 209A | 12SO & DRXXL Orange            |  |                    | 20.5 grs 10400 psi |                    |  |
| 1  | Red Dot         | Fed 209A | Rem R12L                       |  |                    | 20.0 grs 9300 psi  |                    |  |
| 1  | American Select | Fed 209A | CB 6100-12                     | 19.5 grs 6510 psi  | 21.0 grs 7290 psi  | 21.5 grs 7930 psi  |                    |  |
| 1  | Promo           | CCI 209M | 12S3 & DRF3                    |  |                    | 21.0 grs 8700 psi  |                    |  |
| 1  | Promo           | Fed 209A | 12S3 & DRF3                    |  |                    | 20.5 grs 9000 psi  |                    |  |
| 1  | Promo           | Fed 209A | CB 6100-12                     | 18.0 grs 7680 psi  | 19.0 grs 8410 psi  | 20.5 grs 8730 psi  |                    |  |
| 1  | Promo           | Fed 209A | 12SO & DRXXL Orange            |  |                    | 20.5 grs 10400 psi |                    |  |
| 1  | Promo           | Fed 209A | Rem R12L                       |  |                    | 20.0 grs 9300 psi  |                    |  |
| 1  | Green Dot       | CCI 209M | 12S3 & DRF3                    |  |                    | 23.0 grs 7800 psi  |                    |  |
| 1  | Green Dot       | Fed 209A | 12S3 & DRF3                    |  |                    | 23.5 grs 9400 psi  |                    |  |
| 1  | Green Dot       | Fed 209A | 12SO & DRXXL Orange            |  |                    | 22.5 grs 9200 psi  |                    |  |
| 1  | Green Dot       | Fed 209A | Rem R12L                       |  |                    | 21.5 grs 8800 psi  |                    |  |
| 1  | Green Dot       | Fed 209A | CB 6100-12                     | 20.5 grs 6850 psi  | 22.0 grs 7240 psi  |                    |                    |  |
| 12 Gauge 1 1/8, 1 1/4, 1 3/8 & 1 1/2 Ounce Loads             |                 |          |                                |  |                    |                    |                    |  |
| Shot   | Powder          | Primer   | Wad                            | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                    |                    |                    |  |
| (oz)   |                 |          |                                | 1145 fps   | 1200 fps           | 1235 fps           | 1250 fps           |  |
| 1 1/8  | Clay Dot        | Fed 209A | 12S3 & DRF3                    | 18.0 grs 9160 psi  | 19.5 grs 9750 psi  |                    |                    |  |
| 1 1/8  | Clay Dot        | Fed 209A | CB 6118-12                     | 18.0 grs 7390 psi  | 19.0 grs 8690 psi  |                    | 20.5 grs 10390 psi |  |
| 1 1/8  | e3              | Fed 209A | CB 4118-12B                    | 17.0 grs 9385 psi  | 18.5 grs 9860 psi  |                    |                    |  |

12 Gauge 2 3/4 inch Federal Gold Medal Paper Target Shells continued

| 12 Gauge 1 1/8, 1 1/4, 1 3/8 & 1 1/2 Ounce Loads continued |                 |          |                             |  |                    |          |                    |  |
|--|-----------------|----------|-----------------------------|--|--------------------|----------|--------------------|--|
| Shot   | Powder          | Primer   | Wad                         | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                    |          |                    |  |
| (oz)   |                 |          |                             | 1145 fps   | 1200 fps           | 1235 fps | 1250 fps           |  |
| 1 1/8  | e3              | Fed 209A | CB 3118-12AR                | 16.5 grs 9375 psi  | 18.0 grs 10430 psi |          |                    |  |
| 1 1/8  | e3              | Fed 209A | Figure 8 & DRRF8            | 17.0 grs 8765 psi  | 18.0 grs 9640 psi  |          |                    |  |
| 1 1/8  | e3              | Fed 209A | RXP 12                      | 17.0 grs 9280 psi  | 18.0 grs 10320 psi |          |                    |  |
| 1 1/8  | e3              | Fed 209A | WAA 12 & DRA12 & DRXL 1 1/8 | 17.0 grs 9815 psi  | 18.0 grs 10780 psi |          |                    |  |
| 1 1/8  | e3              | Fed 209A | CB 6118-12                  | 17.0 grs 8500 psi  | 18.0 grs 9200 psi  |          | 19.0 grs 10410 psi |  |
| 1 1/8  | e3              | Fed 209A | 12S3 & DRF3                 | 17.0 grs 9640 psi  | 18.5 grs 10955 psi |          |                    |  |
| 1 1/8  | Red Dot         | Fed 209A | 12S3 & DRF3                 | 18.0 grs 8800 psi  | 19.0 grs 8900 psi  |          | 20.5 grs 9900 psi  |  |
| 1 1/8  | Red Dot         | Fed 209A | Red PC                      | 18.0 grs 8300 psi  | 19.0 grs 10300 psi |          | 20.5 grs 10700 psi |  |
| 1 1/8  | Red Dot         | Fed 209A | Rem R12L                    | 18.5 grs 9300 psi  | 19.5 grs 9500 psi  |          |                    |  |
| 1 1/8  | Red Dot         | Fed 209A | RXP 12                      | 18.0 grs 8900 psi  | 19.0 grs 9900 psi  |          | 21.0 grs 10000 psi |  |
| 1 1/8  | Red Dot         | Fed 209A | WAA 12 & DRA12 & DRXL 1 1/8 | 18.0 grs 8600 psi  | 19.0 grs 10500 psi |          |                    |  |
| 1 1/8  | Red Dot         | Fed 209A | Windjammer                  | 18.5 grs 8200 psi  | 19.0 grs 8700 psi  |          |                    |  |
| 1 1/8  | Red Dot         | Fed 209A | CB 6118-12                  | 18.0 grs 8550 psi  | 19.0 grs 9160 psi  |          | 20.0 grs 9910 psi  |  |
| 1 1/8  | Green Dot       | Fed 209A | 12S3 & DRF3                 | 18.5 grs 7400 psi  | 21.0 grs 7800 psi  |          | 23.0 grs 9100 psi  |  |
| 1 1/8  | Green Dot       | Fed 209A | Versalite                   | 19.5 grs 6900 psi  | 21.0 grs 8300 psi  |          | 22.5 grs 8500 psi  |  |
| 1 1/8  | Green Dot       | Fed 209A | Red PC                      | 20.0 grs 7600 psi  | 21.0 grs 8800 psi  |          | 22.5 grs 9600 psi  |  |
| 1 1/8  | Green Dot       | Fed 209A | Rem R12L                    | 19.0 grs 8000 psi  | 20.0 grs 8600 psi  |          |                    |  |
| 1 1/8  | Green Dot       | Fed 209A | RXP 12                      | 18.5 grs 8100 psi  | 20.0 grs 8600 psi  |          | 21.5 grs 9300 psi  |  |
| 1 1/8  | Green Dot       | Fed 209A | WAA 12 & DRA12 & DRXL 1 1/8 | 18.5 grs 8000 psi  | 19.5 grs 9000 psi  |          | 21.5 grs 10500 psi |  |
| 1 1/8  | Green Dot       | Fed 209A | Windjammer                  | 20.5 grs 6600 psi  | 22.0 grs 7700 psi  |          |                    |  |
| 1 1/8  | Green Dot       | Fed 209A | CB 6118-12                  | 20.0 grs 7380 psi  | 21.0 grs 7810 psi  |          | 22.5 grs 8840 psi  |  |
| 1 1/8  | Promo           | Fed 209A | 12S3 & DRF3                 | 18.0 grs 8800 psi  | 19.0 grs 8900 psi  |          | 20.5 grs 9900 psi  |  |
| 1 1/8  | Promo           | Fed 209A | Red PC                      | 18.0 grs 8300 psi  | 19.0 grs 10300 psi |          | 20.5 grs 10700 psi |  |
| 1 1/8  | Promo           | Fed 209A | Rem R12L                    | 18.5 grs 9300 psi  | 19.5 grs 9500 psi  |          |                    |  |
| 1 1/8  | Promo           | Fed 209A | RXP 12                      | 18.0 grs 8900 psi  | 19.0 grs 9900 psi  |          | 21.0 grs 10000 psi |  |
| 1 1/8  | Promo           | Fed 209A | WAA 12 & DRA12 & DRXL 1 1/8 | 18.0 grs 8600 psi  | 19.0 grs 10500 psi |          |                    |  |
| 1 1/8  | Promo           | Fed 209A | Windjammer                  | 18.5 grs 8200 psi  | 19.0 grs 8700 psi  |          |                    |  |
| 1 1/8  | Promo           | Fed 209A | CB 6118-12                  | 18.0 grs 8550 psi  | 19.0 grs 9160 psi  |          | 20.0 grs 9910 psi  |  |
| 1 1/8  | American Select | Fed 209A | 12S3 & DRF3                 | 19.0 grs 8200 psi  | 20.5 grs 10400 psi |          |                    |  |
| 1 1/8  | American Select | Fed 209A | Versalite                   | 19.0 grs 7900 psi  | 20.0 grs 10100 psi |          |                    |  |
| 1 1/8  | American Select | Fed 209A | Figure 8 & DRRF8            | 19.0 grs 7600 psi  | 20.0 grs 9800 psi  |          |                    |  |

12 Gauge 2 3/4 inch Federal Gold Medal Paper Target Shells continued

| 12 Gauge 1 1/8, 1 1/4, 1 3/8 & 1 1/2 Ounce Loads continued |                 |          |                             |  |                    |                    |                   |
|--|-----------------|----------|-----------------------------|--|--------------------|--------------------|-------------------|
| Shot   | Powder          | Primer   | Wad                         | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                    |                    |                   |
| (oz)   |                 |          |                             | 1145 fps   | 1200 fps           | 1235 fps           | 1250 fps          |
| 1 1/8  | American Select | Fed 209A | WAA 12 & DRA12 & DRXL 1 1/8 | 19.0 grs 8400 psi  | 20.5 grs 10400 psi |                    |                   |
| 1 1/8  | American Select | Fed 209A | WT 12 (Orange)              | 19.0 grs 8100 psi  | 20.5 grs 10200 psi |                    |                   |
| 1 1/8  | American Select | Fed 209A | Windjammer                  | 19.5 grs 7100 psi  | 20.0 grs 9100 psi  |                    |                   |
| 1 1/8  | American Select | Rem 209P | 12S3 & DRF3                 | 19.0 grs 8500 psi  | 21.0 grs 9700 psi  |                    |                   |
| 1 1/8  | American Select | Win 209  | 12S3 & DRF3                 | 19.0 grs 8900 psi  | 20.5 grs 9700 psi  |                    |                   |
| 1 1/8  | American Select | Fed 209A | CB 6118-12                  | 19.5 grs 7290 psi  | 20.5 grs 8130 psi  |                    | 22.0 grs 9440 psi |
| 1 1/8  | Unique          | Fed 209A | 12S3 & DRF3                 |  | 22.0 grs 7200 psi  |                    | 23.0 grs 8300 psi |
| 1 1/8  | Unique          | Fed 209A | Versalite                   |  | 22.0 grs 7900 psi  |                    | 23.0 grs 8700 psi |
| 1 1/8  | Unique          | Fed 209A | Red PC                      |  | 22.5 grs 8400 psi  |                    | 24.5 grs 8500 psi |
| 1 1/8  | Unique          | Fed 209A | Rem R12L                    |  | 22.0 grs 7800 psi  |                    |                   |
| 1 1/8  | Unique          | Fed 209A | RXP 12                      |  | 21.0 grs 8000 psi  |                    | 22.0 grs 9500 psi |
| 1 1/8  | Unique          | Fed 209A | WAA 12 & DRA12 & DRXL 1 1/8 |  | 21.0 grs 8600 psi  |                    |                   |
| 1 1/8  | Unique          | Fed 209A | Windjammer                  |  | 23.5 grs 7600 psi  |                    |                   |
| 1 1/4  | Green Dot       | CCI 209M | 12S4                        |  |                    | 23.0 grs 10500 psi |                   |
| 1 1/4  | Green Dot       | Fed 209A | 12S4                        |  |                    | 23.0 grs 10500 psi |                   |
| 1 1/4  | Green Dot       | Fed 209A | Versalite                   |  |                    | 23.0 grs 9600 psi  |                   |
| 1 1/4  | Green Dot       | Fed 209A | SP 12                       |  |                    | 21.0 grs 9600 psi  |                   |
| 1 1/4  | Green Dot       | Fed 209A | WAA 12 & DRA12 & DRXL 1 1/8 |  |                    | 21.0 grs 10500 psi |                   |
| 1 1/4  | Green Dot       | Fed 209A | WAA 12F114                  |  |                    | 23.0 grs 9900 psi  |                   |
| 1 1/4  | Green Dot       | Rem 209P | 12S4                        |  |                    | 23.0 grs 9900 psi  |                   |
| 1 1/4  | Unique          | CCI 209M | 12S4                        |  |                    | 25.5 grs 9700 psi  |                   |
| 1 1/4  | Unique          | Fed 209A | 12S4                        |  |                    | 24.0 grs 9800 psi  |                   |
| 1 1/4  | Unique          | Fed 209A | Versalite                   |  |                    | 23.0 grs 8800 psi  |                   |
| 1 1/4  | Unique          | Fed 209A | SP 12                       |  |                    | 22.0 grs 9600 psi  |                   |
| 1 1/4  | Unique          | Fed 209A | WAA 12 & DRA12 & DRXL 1 1/8 |  |                    | 22.0 grs 10000 psi |                   |
| 1 1/4  | Unique          | Fed 209A | WAA 12F114                  |  |                    | 23.5 grs 9500 psi  |                   |
| 1 1/4  | Unique          | Rem 209P | 12S4                        |  |                    | 25.5 grs 9100 psi  |                   |
| 1 1/4  | Unique          | Win 209  | 12S4                        |  |                    | 24.5 grs 10600 psi |                   |
| 1 3/8  | Blue Dot        | CCI 209M | SP 12                       |  |                    |                    | 34.5 grs 9500 psi |

12 Gauge 2 3/4 inch Federal Gold Medal Paper Target Shells continued

| 12 Gauge 1 1/8, 1 1/4, 1 3/8 & 1 1/2 Ounce Loads continued |           |          |                                |  |                    |                    |                   |
|--|-----------|----------|--------------------------------|--|--------------------|--------------------|-------------------|
| Shot   | Powder    | Primer   | Wad                            | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                    |                    |                   |
| (oz)   |           |          |                                | 1145 fps   | 1200 fps           | 1235 fps           | 1250 fps          |
| 1 3/8  | Blue Dot  | Fed 209A | SP 12                          |  |                    |                    | 34.0 grs 9900 psi |
| 1 3/8  | Blue Dot  | Rem 209P | SP 12                          |  |                    |                    | 36.0 grs 8300 psi |
| 1 3/8  | Blue Dot  | Win 209  | SP 12                          |  |                    |                    | 34.5 grs 9500 psi |
| 1 1/2  | Herco     | Fed 209A | SP 12                          | 25.0 grs 10200 psi                                       |                    |                    |                   |
| 1 1/2  | Blue Dot  | Fed 209A | RP 12                          | 32.5 grs 8800 psi  |                    |                    |                   |
| 1 1/2  | Blue Dot  | CCI 209M | RP 12                          |  | 35.0 grs 9400 psi  |                    |                   |
| 1 1/2  | Blue Dot  | Fed 209A | RP 12                          |  | 34.0 grs 9300 psi  |                    |                   |
| 1 1/2  | Blue Dot  | Rem 209P | RP 12                          |  | 34.5 grs 10300 psi |                    |                   |
| 1 1/2  | Blue Dot  | Win 209  | RP 12                          |  | 35.0 grs 9600 psi  |                    |                   |
| 12 GAUGE 2 3/4 INCH FIOCCHI PLASTIC TARGET SHELLS          |           |          |                                |  |                    |                    |                   |
| 12 Gauge 7/8 and 1 Ounce Target Loads                      |           |          |                                |  |                    |                    |                   |
| Shot   | Powder    | Primer   | Wad                            | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                    |                    |                   |
| (oz)   |           |          |                                | 1200 fps   | 1250 fps           | 1300 fps           |                   |
| 7/8  | Red Dot   | Fio 616  | 12SO                           | 17.5 grs 6700 psi  | 19.0 grs 6900 psi  | 19.5 grs 8800 psi  |                   |
| 7/8  | Red Dot   | Fio 616  | Purple PC                      | 17.5 grs 6400 psi  | 19.0 grs 6700 psi  | 20.0 grs 8600 psi  |                   |
| 7/8  | Red Dot   | Fio 616  | TGT 12 & DRRT12                | 17.0 grs 6900 psi  | 18.5 grs 7000 psi  | 20.0 grs 7900 psi  |                   |
| 7/8  | Red Dot   | Fio 616  | WAA12SL & DRXL-1 & Jammer XL-1 | 17.0 grs 6700 psi  | 18.5 grs 6800 psi  | 20.0 grs 8100 psi  |                   |
| 7/8  | Green Dot | Fio 616  | Purple PC                      |  |                    | 22.5 grs 7700 psi  |                   |
| 7/8  | Green Dot | Fio 616  | TGT 12 & DRRT12                |  |                    | 22.0 grs 7600 psi  |                   |
| 7/8  | Green Dot | Fio 616  | WAA12SL & DRXL-1 & Jammer XL-1 |  |                    | 22.0 grs 7900 psi  |                   |
| 7/8  | Promo     | Fio 616  | 12SO                           | 17.5 grs 6700 psi  | 19.0 grs 6900 psi  | 19.5 grs 8800 psi  |                   |
| 7/8  | Promo     | Fio 616  | Purple PC                      | 17.5 grs 6400 psi  | 19.0 grs 6700 psi  | 20.0 grs 8600 psi  |                   |
| 7/8  | Promo     | Fio 616  | TGT 12 & DRRT12                | 17.0 grs 6900 psi  | 18.5 grs 7000 psi  | 20.0 grs 7900 psi  |                   |
| 7/8  | Promo     | Fio 616  | WAA12SL & DRXL-1 & Jammer XL-1 | 17.0 grs 6700 psi  | 18.5 grs 6800 psi  | 20.0 grs 8100 psi  |                   |
| 1  | Red Dot   | Fio 616  | 12SO                           | 18.0 grs 9100 psi  |                    |                    |                   |
| 1  | Red Dot   | Fio 616  | Purple PC                      | 18.0 grs 8100 psi  | 19.0 grs 9500 psi  | 21.0 grs 9800 psi  |                   |
| 1  | Red Dot   | Fio 616  | TGT 12 & DRRT12                | 18.0 grs 8500 psi  | 19.0 grs 9300 psi  | 20.5 grs 10100 psi |                   |
| 1  | Red Dot   | Fio 616  | WAA12SL & DRXL-1 & Jammer XL-1 | 18.0 grs 8500 psi  | 19.0 grs 9500 psi  | 20.5 grs 10300 psi |                   |
| 1  | Green Dot | Fio 616  | 12SO                           | 20.0 grs 8100 psi  |                    |                    |                   |
| 1  | Green Dot | Fio 616  | Purple PC                      | 20.0 grs 7200 psi  | 21.0 grs 8200 psi  | 23.0 grs 8400 psi  |                   |
| 1  | Green Dot | Fio 616  | TGT 12 & DRRT12                | 20.0 grs 7400 psi  | 21.0 grs 8400 psi  | 22.5 grs 8600 psi  |                   |
| 1  | Green Dot | Fio 616  | WAA12SL & DRXL-1 & Jammer XL-1 | 20.0 grs 7900 psi  | 21.0 grs 8100 psi  | 22.5 grs 9400 psi  |                   |
| 1  | Promo     | Fio 616  | 12SO                           | 18.0 grs 9100 psi  |                    |                    |                   |



12 Gauge 2 3/4 inch Fiocchi Plastic Target Shells continued

| 12 Gauge 7/8 and 1 Ounce Target Loads continued  |                 |         |                                |  |                   |                    |                    |
|--|-----------------|---------|--------------------------------|--|-------------------|--------------------|--------------------|
| Shot   | Powder          | Primer  | Wad                            | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                   |                    |                    |
| (oz)   |                 |         |                                | 1200 fps   | 1250 fps          | 1300 fps           |                    |
| 1  | Promo           | Fio 616 | Purple PC                      | 18.0 grs 8100 psi  | 19.0 grs 9500 psi | 21.0 grs 9800 psi  |                    |
| 1  | Promo           | Fio 616 | TGT 12 & DRRT12                | 18.0 grs 8500 psi  | 19.0 grs 9300 psi | 20.5 grs 10100 psi |                    |
| 1  | Promo           | Fio 616 | WAA12SL & DRXL-1 & Jammer XL-1 | 18.0 grs 8500 psi  | 19.0 grs 9500 psi | 20.5 grs 10300 psi |                    |
| 12 Gauge 1 1/8, 1 1/4, 1 3/8 & 1 1/2 Ounce Loads |                 |         |                                |  |                   |                    |                    |
| Shot   | Powder          | Primer  | Wad                            | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                   |                    |                    |
| (oz)   |                 |         |                                | 1090 fps   | 1145 fps          | 1200 fps           | 1250 fps           |
| 1 1/8  | American Select | Fio 616 | CB 3118-12AR                   | 18.0 grs 7100 psi  | 19.5 grs 8000 psi | 21.0 grs 9000 psi  | 22.5 grs 10700 psi |
| 1 1/8  | American Select | Fio 616 | 12S3 & DRF3                    | 17.5 grs 7400 psi  | 19.0 grs 8700 psi | 20.5 grs 9400 psi  | 22.0 grs 10300 psi |
| 1 1/8  | Red Dot         | Fio 616 | 12S3 & DRF3                    | 16.0 grs 8400 psi  | 18.0 grs 9200 psi | 19.0 grs 9700 psi  |                    |
| 1 1/8  | Green Dot       | Fio 616 | 12S3 & DRF3                    | 18.5 grs 7200 psi  | 20.0 grs 7500 psi |                    |                    |
| 1 1/8  | Promo           | Fio 616 | 12S3 & DRF3                    | 16.0 grs 8400 psi  | 18.0 grs 9200 psi | 19.0 grs 9700 psi  |                    |
| 1 1/8  | Red Dot         | Fio 616 | Versalite                      | 16.5 grs 8100 psi  | 17.5 grs 9000 psi | 18.5 grs 9500 psi  |                    |
| 1 1/8  | Red Dot         | Fio 616 | Figure 8 & DRRF8               | 16.0 grs 8000 psi  | 18.0 grs 8400 psi | 19.5 grs 9600 psi  | 20.5 grs 10200 psi |
| 1 1/8  | Red Dot         | Fio 616 | RXP 12                         | 16.5 grs 8700 psi  | 18.0 grs 8700 psi | 19.5 grs 9700 psi  |                    |
| 1 1/8  | Red Dot         | Fio 616 | WAA 12 & DRA12 & DRXL 1 1/8    | 17.0 grs 7600 psi  | 18.0 grs 9000 psi | 19.5 grs 9400 psi  |                    |
| 1 1/8  | Red Dot         | Fio 616 | WAA12SL & DRXL-1 & Jammer XL-1 | 17.0 grs 7300 psi  | 18.0 grs 8300 psi |                    |                    |
| 1 1/8  | Red Dot         | Fio 616 | Windjammer                     |  | 18.5 grs 7400 psi | 20.0 grs 8600 psi  | 21.0 grs 9400 psi  |
| 1 1/8  | Green Dot       | Fio 616 | Versalite                      | 18.5 grs 7100 psi  | 19.5 grs 7500 psi | 21.0 grs 8200 psi  | 22.5 grs 9300 psi  |
| 1 1/8  | Green Dot       | Fio 616 | Figure 8 & DRRF8               | 18.5 grs 6500 psi  | 20.0 grs 7100 psi | 21.5 grs 8500 psi  | 23.0 grs 8800 psi  |
| 1 1/8  | Green Dot       | Fio 616 | RXP 12                         | 18.5 grs 6700 psi  | 20.0 grs 7200 psi | 21.5 grs 7900 psi  | 23.0 grs 9200 psi  |
| 1 1/8  | Green Dot       | Fio 616 | WAA 12 & DRA12 & DRXL 1 1/8    | 18.5 grs 7000 psi  | 20.0 grs 7600 psi | 21.5 grs 8100 psi  | 23.0 grs 8900 psi  |
| 1 1/8  | Green Dot       | Fio 616 | Windjammer                     |  | 19.5 grs 7200 psi | 21.0 grs 7700 psi  | 22.5 grs 9000 psi  |
| 1 1/8  | Promo           | Fio 616 | Versalite                      | 16.5 grs 8100 psi  | 17.5 grs 9000 psi | 18.5 grs 9500 psi  |                    |
| 1 1/8  | Promo           | Fio 616 | Figure 8 & DRRF8               | 16.0 grs 8000 psi  | 18.0 grs 8400 psi | 19.5 grs 9600 psi  | 20.5 grs 10200 psi |
| 1 1/8  | Promo           | Fio 616 | RXP 12                         | 16.5 grs 8700 psi  | 18.0 grs 8700 psi | 19.5 grs 9700 psi  |                    |
| 1 1/8  | Promo           | Fio 616 | WAA 12 & DRA12 & DRXL 1 1/8    | 17.0 grs 7600 psi  | 18.0 grs 9000 psi | 19.5 grs 9400 psi  |                    |
| 1 1/8  | Promo           | Fio 616 | WAA12SL & DRXL-1 & Jammer XL-1 | 17.0 grs 7300 psi  | 18.0 grs 8300 psi |                    |                    |
| 1 1/8  | Promo           | Fio 616 | Windjammer                     |  | 18.5 grs 7400 psi | 20.0 grs 8600 psi  | 21.0 grs 9400 psi  |
| 1 1/8  | Unique          | Fio 616 | Versalite                      |  |                   | 24.0 grs 7100 psi  | 25.0 grs 7800 psi  |
| 1 1/8  | Unique          | Fio 616 | Figure 8 & DRRF8               |  |                   | 23.5 grs 7000 psi  | 24.5 grs 7600 psi  |
| 1 1/8  | Unique          | Fio 616 | RXP 12                         |  |                   | 22.5 grs 7200 psi  | 23.5 grs 8200 psi  |

12 Gauge 2 3/4 inch Fiocchi Plastic Target Shells continued

| 12 Gauge 1 1/8, 1 1/4, 1 3/8 & 1 1/2 Ounce Loads continued |           |          |                             |  |                   |                   |                    |  |
|--|-----------|----------|-----------------------------|--|-------------------|-------------------|--------------------|--|
| Shot   | Powder    | Primer   | Wad                         | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                   |                   |                    |  |
| (oz)   |           |          |                             | 1090 fps   | 1145 fps          | 1200 fps          | 1250 fps           |  |
| 1 1/8  | Unique    | Fio 616  | WAA 12 & DRA12 & DRXL1 1/8  |  |                   | 23.5 grs 6800 psi | 25.0 grs 7800 psi  |  |
| 1 1/8  | Unique    | Fio 616  | Windjammer                  |  |                   | 24.0 grs 6400 psi | 25.5 grs 6900 psi  |  |
| 1 1/8  | Herco     | Fio 616  | Versalite                   |  |                   |                   | 25.5 grs 7700 psi  |  |
| 1 1/8  | Herco     | Fio 616  | Figure 8 & DRRF8            |  |                   |                   | 26.0 grs 7300 psi  |  |
| 1 1/8  | Herco     | Fio 616  | RXP 12                      |  |                   |                   | 26.0 grs 7500 psi  |  |
| 1 1/8  | Herco     | Fio 616  | WAA 12 & DRA12 & DRXL 1 1/8 |  |                   |                   | 26.0 grs 7900 psi  |  |
| 1 1/8  | Herco     | Fio 616  | Windjammer                  |  |                   |                   | 26.5 grs 7700 psi  |  |
| 1 1/4  | Green Dot | CCI 209M | Rem R12H                    |  |                   |                   | 24.5 grs 8000 psi  |  |
| 1 1/4  | Green Dot | Fio 616  | 12S4                        |  |                   |                   | 23.0 grs 9700 psi  |  |
| 1 1/4  | Green Dot | Win 209  | WAA 12F114                  |  |                   |                   | 23.0 grs 10000 psi |  |
| 1 1/4  | Unique    | Fio 616  | 12S4                        |  |                   |                   | 25.0 grs 8800 psi  |  |
| 1 1/4  | Unique    | Win 209  | WAA 12F114                  |  |                   |                   | 25.0 grs 8700 psi  |  |
| 1 1/2  | Blue Dot  | Fio 616  | RP 12                       |  | 32.5 grs 8700 psi |                   |                    |  |
| 1 1/2  | Blue Dot  | CCI 209M | RP 12                       |  |                   | 33.0 grs 9500 psi | 36.5 grs 10600 psi |  |
| 1 1/2  | Blue Dot  | Fio 616  | RP 12                       |  |                   | 36.5 grs 9000 psi | 37.5 grs 9600 psi  |  |
| 1 1/2  | Blue Dot  | Win 209  | RP 12                       |  |                   | 35.5 grs 8600 psi | 36.5 grs 10300 psi |  |

| 12 GAUGE 2 3/4 INCH 1 1/8, 1 1/4 AND 1 3/8 HEAVY LOADS                                 |        |          |                             |  |                    |          |          |  |
|--|--------|----------|-----------------------------|--|--------------------|----------|----------|--|
| 12 Gauge 2 3/4 inch Remington Plastic Shells (STS, Nitro 27, Premier RXP and Gun Club) |        |          |                             |  |                    |          |          |  |
| Shot   | Powder | Primer   | Wad                         | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                    |          |          |  |
| (oz)   |        |          |                             | 1275 fps   | 1310 fps           | 1330 fps | 1375 fps |  |
| 1 1/8  | Unique | CCI 209M | RXP 12                      |  | 25.0 grs 10000 psi |          |          |  |
| 1 1/8  | Unique | FIO 616  | RXP 12                      |  | 26.0 grs 9900 psi  |          |          |  |
| 1 1/8  | Unique | Rem 209P | Versalite                   |  | 25.5 grs 9900 psi  |          |          |  |
| 1 1/8  | Unique | Rem 209P | RXP 12                      |  | 24.5 grs 9700 psi  |          |          |  |
| 1 1/8  | Unique | Rem 209P | WAA 12 & DRA12 & DRXL 1 1/8 |  | 25.0 grs 10500 psi |          |          |  |
| 1 1/8  | Unique | Rem 209P | Windjammer                  |  | 26.5 grs 8600 psi  |          |          |  |
| 1 1/8  | Unique | Win 209  | RXP 12                      |  | 26.0 grs 9800 psi  |          |          |  |
| 1 1/8  | Herco  | CCI 209M | RXP 12                      |  | 26.5 grs 9700 psi  |          |          |  |
| 1 1/8  | Herco  | Win 209  | RXP 12                      |  | 27.0 grs 9300 psi  |          |          |  |
| 1 1/8  | Herco  | FIO 616  | RXP 12                      |  | 27.5 grs 9300 psi  |          |          |  |
| 1 1/8  | Herco  | Rem 209P | Versalite                   |  | 27.0 grs 8800 psi  |          |          |  |
| 1 1/8  | Herco  | Rem 209P | RXP 12                      |  | 27.5 grs 8400 psi  |          |          |  |
| 1 1/8  | Herco  | Rem 209P | WAA 12 & DRA12 & DRXL 1 1/8 |  | 27.0 grs 8800 psi  |          |          |  |

12 Gauge 2 3/4 inch 1 1/8, 1 1/4 and 1 3/8 Heavy Loads continued

| 12 Gauge 2 3/4 inch Remington Plastic Shells (STS, Nitro 27, Premier RXP and Gun Club) continued |           |          |                |  |                    |                    |                    |
|--|-----------|----------|----------------|--|--------------------|--------------------|--------------------|
| Shot   | Powder    | Primer   | Wad            | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                    |                    |                    |
| (oz)   |           |          |                | 1275 fps   | 1310 fps           | 1330 fps           | 1375 fps           |
| 1 1/8  | Herco     | Rem 209P | Windjammer     |  | 28.5 grs 8600 psi  |                    |                    |
| 1 1/4  | Herco     | Rem 209P | SP 12          | 27.0 grs 10700 psi                                       |                    |                    |                    |
| 1 1/4  | Herco     | Rem 209P | WAA 12F114     | 26.5 grs 10500 psi                                       |                    |                    |                    |
| 1 1/4  | Herco     | Win 209  | SP 12          | 26.0 grs 10600 psi                                       |                    |                    |                    |
| 1 1/4  | Blue Dot  | Win 209  | SP 12          | 35.5 grs 9100 psi  |                    | 36.5 grs 9900 psi  |                    |
| 1 1/4  | Blue Dot  | CCI 209M | SP 12          | 34.5 grs 9800 psi  |                    | 35.5 grs 10300 psi |                    |
| 1 1/4  | Blue Dot  | FIO 616  | SP 12          | 35.5 grs 9300 psi  |                    | 35.5 grs 9900 psi  |                    |
| 1 1/4  | Blue Dot  | Rem 209P | CB 1138-12     |  |                    | 37.5 grs 10200 psi |                    |
| 1 1/4  | Blue Dot  | Rem 209P | SP 12          |  |                    | 37.5 grs 9700 psi  |                    |
| 1 3/8  | Blue Dot  | CCI 209M | RP 12          |  | 35.5 grs 10400 psi |                    |                    |
| 1 3/8  | Blue Dot  | FIO 616  | RP 12          |  | 35.5 grs 10000 psi |                    |                    |
| 1 3/8  | Blue Dot  | Rem 209P | SP 12          |  | 37.5 grs 10300 psi |                    |                    |
| 1 3/8  | Blue Dot  | Win 209  | RP 12          |  | 35.5 grs 10500 psi |                    |                    |
| 1 3/8  | Blue Dot  | Rem 209P | RP 12          |  | 36.5 grs 9900 psi  |                    |                    |
| 12 Gauge 2 3/4 inch Federal® Gold Medal® Plastic Target Shells                                   |           |          |                |  |                    |                    |                    |
| Shot   | Powder    | Primer   | Wad            | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                    |                    |                    |
| (oz)   |           |          |                | 1275 fps   | 1310 fps           | 1350 fps           | 1440 fps           |
| 1 1/8  | Herco     | Fed 209A | WAA12F114      |  |                    |                    | 30.0 grs 10500 psi |
| 1 1/8  | Herco     | Fed 209A | Red PC         |  |                    |                    | 32.0 grs 10500 psi |
| 1 1/8  | Green Dot | Fed 209A | RXP 12         |  | 24.0 grs 10400 psi |                    |                    |
| 1 1/8  | Green Dot | Fed 209A | WAA 12 (White) |  | 23.0 grs 10400 psi |                    |                    |
| 1 1/8  | Green Dot | Fed 209A | Windjammer     |  | 24.0 grs 8800 psi  |                    |                    |
| 1 1/8  | Unique    | Fed 209A | Versalite      |  | 25.0 grs 10000 psi |                    |                    |
| 1 1/8  | Unique    | Fed 209A | RXP 12         |  | 26.0 grs 10300 psi |                    |                    |
| 1 1/8  | Unique    | Fed 209A | WAA 12 (White) |  | 25.0 grs 9200 psi  |                    |                    |
| 1 1/8  | Unique    | Fed 209A | Windjammer     |  | 25.0 grs 9700 psi  |                    |                    |
| 1 1/4  | Herco     | Fed 209A | SP 12          | 27.0 grs 10100 psi                                       |                    |                    |                    |
| 1 1/4  | Herco     | Fed 209A | WAA12F114      | 27.0 grs 10500 psi                                       | 28.0 grs 10800 psi |                    |                    |
| 1 1/4  | Herco     | Rem 209P | 12S4           | 27.5 grs 9200 psi  |                    |                    |                    |
| 1 1/4  | Herco     | Fed 209A | Red PC         |  | 29.0 grs 10000 psi |                    |                    |
| 1 1/4  | Blue Dot  | CCI 209M | 12S4           | 35.0 grs 9100 psi  |                    |                    |                    |
| 1 1/4  | Blue Dot  | Fed 209A | 12S4           | 34.0 grs 8900 psi  |                    |                    |                    |
| 1 1/4  | Blue Dot  | Win 209  | 12S4           | 35.0 grs 8700 psi  |                    |                    |                    |
| 1 1/4  | Blue Dot  | Fed 209A | RP 12          |  |                    |                    | 40.5 grs 10700 psi |
| 1 1/4  | Blue Dot  | CCI 209M | SP 12          |  |                    | 37.5 grs 8300 psi  |                    |
| 1 1/4  | Blue Dot  | Fed 209A | SP 12          |  |                    | 35.0 grs 10500 psi |                    |

12 Gauge 2 3/4 inch 1 1/8, 1 1/4 and 1 3/8 Heavy Loads continued

| 12 Gauge 2 3/4 inch Federal® Gold Medal® Plastic Target Shells continued |           |          |                             |  |                    |                    |          |
|--|-----------|----------|-----------------------------|--|--------------------|--------------------|----------|
| Shot   | Powder    | Primer   | Wad                         | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                    |                    |          |
| (oz)   |           |          |                             | 1275 fps   | 1310 fps           | 1350 fps           | 1440 fps |
| 1 1/4  | Blue Dot  | Win 209  | SP 12                       |  |                    | 37.0 grs 9000 psi  |          |
| 1 3/8  | Blue Dot  | CCI 209M | RP 12                       | 33.0 grs 9600 psi  | 36.5 grs 9000 psi  |                    |          |
| 1 3/8  | Blue Dot  | Fed 209A | RP 12                       | 34.0 grs 9900 psi  | 35.5 grs 10700 psi |                    |          |
| 1 3/8  | Blue Dot  | Rem 209P | RP 12                       | 36.0 grs 7800 psi  | 39.0 grs 8600 psi  |                    |          |
| 1 3/8  | Blue Dot  | Win 209  | RP 12                       | 34.5 grs 8600 psi  | 36.0 grs 9200 psi  |                    |          |
| 12 Gauge 2 3/4 inch Federal® Gold Medal® Paper Target Shells             |           |          |                             |  |                    |                    |          |
| Shot   | Powder    | Primer   | Wad                         | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                    |                    |          |
| (oz)   |           |          |                             | 1310 fps   | 1330 fps           | 1400 fps           | 1450 fps |
| 1 1/8  | Herco     | Fed 209A | WAA 12F114                  |  |                    | 30.0 grs 10700 psi |          |
| 1 1/4  | Herco     | CCI 209M | 12S4                        |  | 29.5 grs 9900 psi  |                    |          |
| 1 1/4  | Herco     | Fed 209A | RP 12                       |  | 29.0 grs 9400 psi  |                    |          |
| 1 1/4  | Herco     | Fed 209A | SP 12                       |  | 29.5 grs 9300 psi  |                    |          |
| 1 1/4  | Herco     | Fed 209A | WAA 12F114                  |  | 29.5 grs 9200 psi  |                    |          |
| 1 1/4  | Blue Dot  | CCI 209M | 12S4                        |  | 37.0 grs 9000 psi  |                    |          |
| 1 1/4  | Blue Dot  | Fed 209A | 12S4                        |  | 37.0 grs 10300 psi |                    |          |
| 1 3/8  | Blue Dot  | CCI 209M | SP 12                       | 37.0 grs 10600 psi                                       |                    |                    |          |
| 1 3/8  | Blue Dot  | Fed 209A | SP 12                       | 35.5 grs 10300 psi                                       |                    |                    |          |
| 1 3/8  | Blue Dot  | Rem 209P | SP 12                       | 38.0 grs 8600 psi  |                    |                    |          |
| 1 3/8  | Blue Dot  | Win 209  | SP 12                       | 36.5 grs 10200 psi                                       |                    |                    |          |
| 1 3/8  | Blue Dot  | Fed 209A | RP 12                       |  | 37.5 grs 10700 psi |                    |          |
| 12 Gauge 2 3/4 inch Winchester AA Plastic Shells                         |           |          |                             |  |                    |                    |          |
| Shot   | Powder    | Primer   | Wad                         | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                    |                    |          |
| (oz)   |           |          |                             | 1300 fps   | 1350 fps           | 1375 fps           | 1425 fps |
| 1 1/8  | Green Dot | Win 209  | Red PC                      | 23.0 grs 10200 psi                                       |                    |                    |          |
| 1 1/8  | Unique    | CCI 209M | WAA 12 & DRA12 & DRXL 1 1/8 | 25.5 grs 9700 psi  |                    |                    |          |
| 1 1/8  | Unique    | Rem 209P | WAA 12 & DRA12 & DRXL 1 1/8 | 26.0 grs 9700 psi  |                    |                    |          |
| 1 1/8  | Unique    | Win 209  | Versalite                   | 25.0 grs 10300 psi                                       |                    |                    |          |
| 1 1/8  | Unique    | Win 209  | Red PC                      | 25.0 grs 9100 psi  |                    |                    |          |
| 1 1/8  | Unique    | Win 209  | RXP 12                      | 24.0 grs 9800 psi  |                    |                    |          |
| 1 1/8  | Unique    | Win 209  | WAA 12 & DRA12 & DRXL 1 1/8 | 25.5 grs 10000 psi                                       |                    |                    |          |
| 1 1/8  | Herco     | Rem 209P | WAA 12 & DRA12 & DRXL 1 1/8 | 27.0 grs 8100 psi  |                    |                    |          |
| 1 1/8  | Herco     | Win 209  | Versalite                   | 26.5 grs 9900 psi  |                    |                    |          |
| 1 1/8  | Herco     | Win 209  | RXP 12                      | 26.5 grs 9100 psi  |                    |                    |          |

12 Gauge 2 3/4 inch 1 1/8, 1 1/4 and 1 3/8 Heavy Loads continued

| 12 Gauge 2 3/4 inch Winchester AA Plastic Shells continued |           |          |                             |  |                    |                    |                    |
|--|-----------|----------|-----------------------------|--|--------------------|--------------------|--------------------|
| Shot   | Powder    | Primer   | Wad                         | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                    |                    |                    |
| (oz)   |           |          |                             | 1300 fps   | 1350 fps           | 1375 fps           | 1425 fps           |
| 1 1/8  | Herco     | Win 209  | WAA 12 & DRA12 & DRXL 1 1/8 | 26.5 grs 9300 psi  |                    |                    |                    |
| 1 1/4  | Herco     | Rem 209P | WAA 12F114                  | 27.0 grs 9400 psi  |                    |                    |                    |
| 1 1/4  | Blue Dot  | Win 209  | SP 12                       | 35.0 grs 8200 psi  |                    |                    |                    |
| 1 1/4  | Blue Dot  | Win 209  | RP 12                       |  |                    | 38.0 grs 10200 psi |                    |
| 1 1/4  | Blue Dot  | Win 209  | SP 12                       |  |                    | 37.0 grs 10300 psi |                    |
| 1 1/4  | Blue Dot  | Win 209  | WAA 12R                     |  |                    | 37.5 grs 10200 psi |                    |
| 1 1/4  | Blue Dot  | Win 209  | CB 1138-12                  |  |                    |                    | 37.5 grs 10600 psi |
| 12 Gauge 2 3/4 inch Fiocchi Plastic Shells                 |           |          |                             |  |                    |                    |                    |
| 1 1/8  | Green Dot | CCI 209M | RXP 12                      | 24.0 grs 10000 psi                                       |                    |                    |                    |
| 1 1/8  | Green Dot | Fio 616  | 12S3 & DRF3                 | 25.0 grs 9600 psi  |                    |                    |                    |
| 1 1/8  | Green Dot | Win 209  | WAA 12 & DRA12 & DRXL 1 1/8 | 25.0 grs 8700 psi  |                    |                    |                    |
| 1 1/8  | Unique    | CCI 209M | RXP 12                      | 26.5 grs 8400 psi  |                    |                    |                    |
| 1 1/8  | Unique    | Fio 616  | 12S3 & DRF3                 | 27.0 grs 8600 psi  |                    |                    |                    |
| 1 1/8  | Unique    | Win 209  | WAA 12 & DRA12 & DRXL 1 1/8 | 26.5 grs 8300 psi  |                    |                    |                    |
| 1 1/4  | Unique    | CCI 209M | 12S4                        | 27.0 grs 10300 psi                                       |                    |                    |                    |
| 1 1/4  | Unique    | Fio 616  | WAA 12F114                  | 27.0 grs 10000 psi                                       |                    |                    |                    |
| 1 1/4  | Herco     | CCI 209M | SP 12                       | 30.0 grs 9200 psi  |                    |                    |                    |
| 1 1/4  | Herco     | Fio 616  | 12S4                        | 30.0 grs 9500 psi  |                    |                    |                    |
| 1 1/4  | Herco     | Fio 616  | SP 12                       | 30.5 grs 8600 psi  |                    |                    |                    |
| 1 1/4  | Herco     | Fio 616  | WAA 12F114                  | 30.0 grs 9200 psi  |                    |                    |                    |
| 1 1/4  | Herco     | Win 209  | WAA 12F114                  | 30.0 grs 10100 psi                                       |                    |                    |                    |
| 1 1/4  | Blue Dot  | CCI 209M | SP 12                       | 41.0 grs 7600 psi  |                    |                    |                    |
| 1 1/4  | Blue Dot  | Fio 616  | 12S4                        | 40.0 grs 8300 psi  |                    |                    |                    |
| 1 1/4  | Blue Dot  | Fio 616  | SP 12                       | 41.0 grs 7700 psi  |                    |                    |                    |
| 1 1/4  | Blue Dot  | Fio 616  | WAA 12F114                  | 39.5 grs 7500 psi  |                    |                    |                    |
| 1 1/4  | Blue Dot  | Win 209  | WAA 12F114                  | 38.5 grs 8300 psi  |                    |                    |                    |
| 1 3/8  | Blue Dot  | CCI 209M | RP 12                       | 37.0 grs 9600 psi  | 40.0 grs 10100 psi |                    |                    |
| 1 3/8  | Blue Dot  | Fio 616  | RP 12                       | 38.0 grs 9100 psi  |                    |                    |                    |
| 1 3/8  | Blue Dot  | Win 209  | RP 12                       | 38.0 grs 9500 psi  | 40.0 grs 9900 psi  |                    |                    |

| 12 GAUGE 3 INCH SHOTSHELL LOAD DATA  |          |          |               |  |                    |                    |                   |
|--|----------|----------|---------------|--|--------------------|--------------------|-------------------|
| 12 Gauge 3 inch Federal® Game Load Plastic Shells with Rolled Paper Base Wad |          |          |               |  |                    |                    |                   |
| Shot   | Powder   | Primer   | Wad           | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                    |                    |                   |
| (oz)   |          |          |               | 1155 fps   | 1245 fps           | 1300 fps           | 1350 fps          |
| 1 3/8  | Herco    | Fed 209A | 12S3 & DRF3   |  |                    | 30.5 grs 10000 psi |                   |
| 1 3/8  | Herco    | Fed 209A | RXP 12        |  |                    | 30.5 grs 9300 psi  |                   |
| 1 3/8  | Herco    | Fed 209A | WAA 12(White) |  |                    | 30.5 grs 9700 psi  |                   |
| 1 3/8  | Blue Dot | Fed 209A | RXP 12        |  |                    | 38.0 grs 9000 psi  |                   |
| 1 3/8  | Blue Dot | Fed 209A | WAA 12(White) |  |                    | 38.0 grs 8800 psi  |                   |
| 1 3/8  | Blue Dot | Fed 209A | 12S4          |  |                    |                    | 40.0 grs 9400 psi |
| 1 3/8  | Blue Dot | Fed 209A | SP 12         |  |                    |                    | 40.0 grs 8900 psi |
| 1 1/2  | Blue Dot | Fed 209A | 12S3 & DRF3   |  |                    | 38.0 grs 9700 psi  |                   |
| 1 1/2  | Blue Dot | Fed 209A | RXP 12        |  |                    | 38.5 grs 9600 psi  |                   |
| 1 1/2  | Blue Dot | Fed 209A | WAA 12(White) |  |                    | 37.5 grs 9800 psi  |                   |
| 1 5/8  | Blue Dot | Fed 209A | SP 12         |  |                    | 38.0 grs 10400 psi |                   |
| 1 3/4  | Blue Dot | Fed 209A | RP 12         |  | 39.0 grs 10500 psi |                    |                   |
| 1 7/8  | Blue Dot | Fed 209A | RP 12         | 34.0 grs 10500 psi                                       |                    |                    |                   |
| 1 7/8  | Blue Dot | Fed 209A | SP 12         | 36.0 grs 10300 psi                                       |                    |                    |                   |
| 12 Gauge 3 inch Federal® One- Piece Plastic Shells                           |          |          |               |  |                    |                    |                   |
| 1 3/8  | Herco    | Fed 209A | 12S3 & DRF3   |  |                    | 31.0 grs 10500 psi |                   |
| 1 3/8  | Blue Dot | Fed 209A | 12S3 & DRF3   |  |                    | 40.5 grs 7900 psi  |                   |
| 1 3/8  | Herco    | Fed 209A | RXP 12        |  |                    | 32.0 grs 10100 psi |                   |
| 1 3/8  | Blue Dot | Fed 209A | WAA 12(White) |  |                    | 38.0 grs 9800 psi  |                   |
| 1 3/8  | Blue Dot | Fed 209A | RXP 12        |  |                    |                    | 42.0 grs 8000 psi |
| 1 3/8  | Blue Dot | Fed 209A | WAA 12(White) |  |                    |                    | 44.0 grs 9900 psi |
| 1 1/2  | Blue Dot | Fed 209A | 12S4          |  |                    | 40.0 grs 9700 psi  |                   |
| 1 1/2  | Blue Dot | Fed 209A | SP 12         |  |                    | 40.0 grs 9000 psi  |                   |
| 1 5/8  | Blue Dot | Fed 209A | 12S4          |  |                    | 40.0 grs 10100 psi |                   |
| 1 5/8  | Blue Dot | Fed 209A | SP 12         |  |                    | 40.0 grs 9400 psi  |                   |
| 1 3/4  | Blue Dot | Fed 209A | RP 12         |  | 39.0 grs 10500 psi |                    |                   |
| 1 7/8  | Blue Dot | Fed 209A | SP 12         | 36.5 grs 9900 psi  |                    |                    |                   |
| 12 Gauge 3 inch Federal® Game Load Plastic with 7/16 Fiber Base Wad          |          |          |               |  |                    |                    |                   |
| Shot   | Powder   | Primer   | Wad           | Charge Weight(grains)/ Velocity (fps) & Pressure (psi)   |                    |                    |                   |
| (oz)   |          |          |               | 1150 fps   | 1175 fps           |                    |                   |
| 1 7/8  | Blue Dot | Fed 209A | WAA12R        |  | 32.5 grs 11200 psi |                    |                   |
| 2  | Blue Dot | Fed 209A | SP 12         | 33.0 grs 11400 psi                                       |                    |                    |                   |

12 Gauge 3 inch Shotgun Load Data continued

| 12 Gauge 3 inch Fiocchi Plastic Shells                                |          |          |                |  |          |                    |                    |
|---|----------|----------|----------------|--|----------|--------------------|--------------------|
| Shot  | Powder   | Primer   | Wad            | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |          |                    |                    |
| (oz)  |          |          |                | 1155 fps   | 1245 fps | 1300 fps           | 1350 fps           |
| 1 3/8   | Herco    | CCI 209M | 12S3 & DRF3    |  |          | 30.0 grs 10000 psi |                    |
| 1 3/8   | Blue Dot | CCI 209M | 12S3 & DRF3    |  |          | 37.0 grs 9000 psi  |                    |
| 1 3/8   | Herco    | Fio 616  | 12S3 & DRF3    |  |          | 31.5 grs 9100 psi  |                    |
| 1 3/8   | Herco    | Fio 616  | RXP 12         |  |          | 32.5 grs 8600 psi  |                    |
| 1 3/8   | Herco    | Fio 616  | WAA 12(White)  |  |          | 31.5 grs 8900 psi  |                    |
| 1 3/8   | Herco    | Win 209  | 12S3 & DRF3    |  |          | 29.5 grs 10600 psi |                    |
| 1 3/8   | Blue Dot | Win 209  | 12S3 & DRF3    |  |          | 37.5 grs 8800 psi  |                    |
| 1 3/8   | Blue Dot | CCI 209M | 12S4           |  |          |                    | 38.0 grs 10400 psi |
| 1 3/8   | Herco    | Fio 616  | 12S4           |  |          |                    | 32.0 grs 10700 psi |
| 1 3/8   | Herco    | Fio 616  | SP 12          |  |          |                    | 32.5 grs 10100 psi |
| 1 3/8   | Blue Dot | Win 209  | 12S4           |  |          |                    | 38.5 grs 10100 psi |
| 1 1/2   | Blue Dot | CCI 209M | 12S4           |  |          | 38.0 grs 10400 psi |                    |
| 1 1/2   | Blue Dot | Fio 616  | 12S4           |  |          | 39.0 grs 10300 psi |                    |
| 1 1/2   | Blue Dot | Fio 616  | SP 12          |  |          | 39.0 grs 9700 psi  |                    |
| 1 1/2   | Blue Dot | Win 209  | 12S4           |  |          | 39.0 grs 10600 psi |                    |
| 1 5/8   | Blue Dot | Fio 616  | 12S4           |  |          | 39.0 grs 10700 psi |                    |
| 1 5/8   | Blue Dot | Fio 616  | SP 12          |  |          | 39.5 grs 9700 psi  |                    |
| 1 7/8   | Blue Dot | Fio 616  | RP 12          | 34.5 grs 10700 psi                                       |          |                    |                    |
| 12 Gauge 3 inch Rem - Peters SP Plastic Shells with Separate Base Wad |          |          |                |  |          |                    |                    |
| 1 3/8   | Herco    | CCI 209M | 12S3 & DRF3    |  |          | 29.5 grs 10000 psi |                    |
| 1 3/8   | Herco    | CCI 209M | RXP 12         |  |          | 30.0 grs 9200 psi  |                    |
| 1 3/8   | Herco    | CCI 209M | WAA 12 (White) |  |          | 30.0 grs 10000 psi |                    |
| 1 3/8   | Blue Dot | CCI 209M | 12S3 & DRF3    |  |          | 42.0 grs 8400 psi  |                    |
| 1 3/8   | Blue Dot | CCI 209M | RXP 12         |  |          | 42.5 grs 8000 psi  |                    |
| 1 3/8   | Blue Dot | CCI 209M | WAA 12 (White) |  |          | 42.0 grs 8500 psi  |                    |
| 1 1/2   | Blue Dot | CCI 209M | 12S4           |  |          | 39.5 grs 9800 psi  |                    |
| 1 1/2   | Blue Dot | CCI 209M | SP 12          |  |          | 40.0 grs 9400 psi  |                    |
| 1 5/8   | Blue Dot | CCI 209M | 12S4           |  |          | 38.5 grs 10200 psi |                    |
| 1 5/8   | Blue Dot | CCI 209M | SP 12          |  |          | 39.0 grs 9800 psi  |                    |
| 1 5/8   | Blue Dot | CCI 209M | WAA12F114      |  |          | 38.5 grs 10500 psi |                    |
| 1 3/4   | Blue Dot | CCI 209M | RP 12          |  |          | 38.5 grs 10700 psi |                    |
| 1 7/8   | Blue Dot | CCI 209M | RP 12          |  |          | 34.0 grs 10300 psi |                    |

| 12 GAUGE 3 1/2 INCH SHOTSHELL LOAD DATA       |          |          |            |  |                    |                    |                    |
|---|----------|----------|------------|--|--------------------|--------------------|--------------------|
| 12 Gauge 3 1/2 inch Federal® Plastic Shells   |          |          |            |  |                    |                    |                    |
| Shot  | Powder   | Primer   | Wad        | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                    |                    |                    |
| (oz)  |          |          |            | 1150 fps   | 1200 fps           | 1220 fps           | 1255 fps           |
| 1 7/8   | Blue Dot | CCI 209M | 12SO       |  | 41.0 grs 9100 psi  |                    |                    |
| 1 7/8   | Blue Dot | CCI 209M | R 12L      |  | 40.5 grs 9600 psi  |                    |                    |
| 1 7/8   | Blue Dot | CCI 209M | WAA 12 SL  |  | 41.0 grs 8900 psi  |                    |                    |
| 1 7/8   | Blue Dot | Win 209  | 12SO       |  | 40.0 grs 9000 psi  |                    |                    |
| 1 7/8   | Blue Dot | CCI 209M | 12SO       |  |                    |                    | 43.0 grs 9800 psi  |
| 1 7/8   | Blue Dot | CCI 209M | R 12L      |  |                    |                    | 42.5 grs 10100 psi |
| 1 7/8   | Blue Dot | CCI 209M | WAA 12 SL  |  |                    |                    | 43.0 grs 9500 psi  |
| 1 7/8   | Blue Dot | Win 209  | 12SO       |  |                    |                    | 42.5 grs 10100 psi |
| 2   | Blue Dot | CCI 209M | 12SO       |  |                    | 42.5 grs 10000 psi |                    |
| 2   | Blue Dot | CCI 209M | R 12L      |  |                    | 42.0 grs 10000 psi |                    |
| 2   | Blue Dot | CCI 209M | WAA 12 SL  |  |                    | 42.5 grs 9800 psi  |                    |
| 2   | Blue Dot | Win 209  | 12SO       |  |                    | 41.0 grs 9900 psi  |                    |
| 2 1/4   | Blue Dot | CCI 209M | 12S4       | 38.5 grs 11100 psi                                       |                    |                    |                    |
| 2 1/4   | Blue Dot | CCI 209M | SP 12      | 38.5 grs 11200 psi                                       |                    |                    |                    |
| 2 1/4   | Blue Dot | CCI 209M | WAA 12F114 | 38.5 grs 11100 psi                                       |                    |                    |                    |
| 2 1/4   | Blue Dot | Win 209  | 12S4       | 38.0 grs 10900 psi                                       |                    |                    |                    |
| 12 Gauge 3 1/2 inch Remington Plastic SP      |          |          |            |  |                    |                    |                    |
| 1 7/8   | Blue Dot | CCI 209M | 12SO       |  | 38.0 grs 10100 psi |                    |                    |
| 1 7/8   | Blue Dot | CCI 209M | R 12L      |  | 38.0 grs 10300 psi |                    |                    |
| 1 7/8   | Blue Dot | CCI 209M | WAA 12 SL  |  | 38.0 grs 10000 psi |                    |                    |
| 1 7/8   | Blue Dot | Win 209  | R 12L      |  | 37.5 grs 10500 psi |                    |                    |
| 1 7/8   | Blue Dot | CCI 209M | 12SO       |  |                    |                    | 39.0 grs 10600 psi |
| 1 7/8   | Blue Dot | CCI 209M | R 12L      |  |                    |                    | 39.0 grs 10900 psi |
| 1 7/8   | Blue Dot | CCI 209M | WAA 12 SL  |  |                    |                    | 39.0 grs 10400 psi |
| 1 7/8   | Blue Dot | Win 209  | R 12L      |  |                    |                    | 38.5 grs 11000 psi |
| 2   | Blue Dot | CCI 209M | 12SO       |  |                    | 39.5 grs 10800 psi |                    |
| 2   | Blue Dot | CCI 209M | R 12L      |  |                    | 39.5 grs 11100 psi |                    |
| 2   | Blue Dot | CCI 209M | WAA 12 SL  |  |                    | 39.0 grs 10700 psi |                    |
| 2   | Blue Dot | Win 209  | R 12L      |  |                    | 39.0 grs 11200 psi |                    |
| 2 1/4   | Blue Dot | CCI 209M | 12S4       | 37.0 grs 11100 psi                                       |                    |                    |                    |
| 2 1/4   | Blue Dot | CCI 209M | SP 12      | 38.0 grs 11100 psi                                       |                    |                    |                    |
| 2 1/4   | Blue Dot | Win 209  | SP 12      | 38.0 grs 11500 psi                                       |                    |                    |                    |
| 12 Gauge 3 1/2 inch Winchester Plastic Shells |          |          |            |  |                    |                    |                    |
| 1 7/8   | Blue Dot | CCI 209M | WAA 12 SL  |  | 38.0 grs 10100 psi |                    |                    |
| 1 7/8   | Blue Dot | Win 209  | 12SO       |  | 38.5 grs 10600 psi |                    |                    |
| 1 7/8   | Blue Dot | Win 209  | R 12L      |  | 38.5 grs 10300 psi |                    |                    |



12 Gauge 3 1/2 inch Shotgun Load Data continued

| 12 Gauge 3 1/2 inch Winchester Plastic Shells <small>continued</small> |          |          |           |  |                    |                    |                    |
|--|----------|----------|-----------|--|--------------------|--------------------|--------------------|
| Shot   | Powder   | Primer   | Wad       | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                    |                    |                    |
| (oz)   |          |          |           | 1150 fps   | 1200 fps           | 1220 fps           | 1255 fps           |
| 1 7/8  | Blue Dot | Win 209  | WAA 12 SL |  | 38.5 grs 10000 psi |                    |                    |
| 1 7/8  | Blue Dot | CCI 209M | WAA 12 SL |  |                    |                    | 39.5 grs 10500 psi |
| 1 7/8  | Blue Dot | Win 209  | 12SO      |  |                    |                    | 40.5 grs 10700 psi |
| 1 7/8  | Blue Dot | Win 209  | R 12L     |  |                    |                    | 40.0 grs 10700 psi |
| 1 7/8  | Blue Dot | Win 209  | WAA 12 SL |  |                    |                    | 40.0 grs 10800 psi |
| 2  | Blue Dot | CCI 209M | WAA 12 SL |  |                    | 39.0 grs 11200 psi |                    |
| 2  | Blue Dot | Win 209  | 12SO      |  |                    | 40.5 grs 11000 psi |                    |
| 2  | Blue Dot | Win 209  | R 12L     |  |                    | 39.0 grs 10600 psi |                    |
| 2  | Blue Dot | Win 209  | WAA 12 SL |  |                    | 40.0 grs 11200 psi |                    |
| 2 1/4  | Blue Dot | Win 209  | SP 12     | 37.0 grs 11200 psi                                       |                    |                    |                    |

| 16 GAUGE 2 3/4 INCH SHOTSHELL LOAD DATA                                   |           |          |       |  |                    |                    |                    |
|---|-----------|----------|-------|--|--------------------|--------------------|--------------------|
| 16 Gauge 2 3/4 inch Federal® Game Load Plastic Shells with Paper Base Wad |           |          |       |  |                    |                    |                    |
| Shot  | Powder    | Primer   | Wad   | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                    |                    |                    |
| (oz)  |           |          |       | 1185 fps   | 1240 fps           | 1260 fps           | 1295 fps           |
| 1 1/8   | Green Dot | Fed 209A | SP 16 | 19.0 grs 10600 psi                                       |                    |                    |                    |
| 1 1/8   | Unique    | Fed 209A | SP 16 | 21.5 grs 8900 psi  | 22.5 grs 9600 psi  |                    |                    |
| 1 1/8   | Herco     | Fed 209A | SP 16 | 22.0 grs 9100 psi  | 23.5 grs 10100 psi |                    | 24.5 grs 10300 psi |
| 1 1/8   | Blue Dot  | Fed 209A | SP 16 |  |                    |                    | 32.0 grs 8600 psi  |
| 1 1/4   | Blue Dot  | Fed 209A | SP 16 |  |                    | 30.5 grs 10200 psi |                    |
| 16 Gauge 2 3/4 inch Fiocchi Plastic Shells                                |           |          |       |  |                    |                    |                    |
| 1 1/8   | Unique    | Fio 616  | SP 16 | 20.5 grs 9900 psi  |                    |                    |                    |
| 1 1/8   | Herco     | Fio 616  | SP 16 | 21.0 grs 10200 psi                                       | 23.5 grs 10700 psi |                    |                    |
| 1 1/8   | Blue Dot  | Fio 616  | SP 16 |  | 31.0 grs 8900 psi  |                    | 32.5 grs 9200 psi  |
| 16 Gauge 2 3/4 inch Remington SP Plastic Shells with Plastic Base Wad     |           |          |       |  |                    |                    |                    |
| 1 1/8   | Blue Dot  | Rem 209P | SP 16 |  | 27.0 grs 9900 psi  |                    |                    |

| 20 GAUGE SHOTSHELL LOAD DATA                       |                 |          |            |  |                    |                     |                    |
|--|-----------------|----------|------------|--|--------------------|---------------------|--------------------|
| 20 Gauge 2 3/4 inch Remington Plastic Shells (STS) |                 |          |            |  |                    |                     |                    |
| Shot   | Powder          | Primer   | Wad        | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                    |                     |                    |
| (oz)   |                 |          |            | 1155 fps   | 1200 fps           | 1250 fps            | 1290 fps           |
| 3/4  | American Select | Rem 209P | RXP 20     |  | 13.5 gr 10,320 psi | 14.0 grs 11,330 psi |                    |
| 3/4  | Green Dot       | Rem 209P | RXP 20     |  | 14.0 grs 9960 psi  |                     | 16.0 grs 11300 psi |
| 3/4  | Green Dot       | Rem 209P | CB 1078-20 |  | 14.0 grs. 9810 psi | 15.0 grs 10510 psi  |                    |
| 7/8  | 20/28           | Rem 209P | Windjammer |  | 15.5 grs 9150 psi  | 16.5 grs 10510 psi  |                    |

20 Gauge Shotgun Load Data continued

| 20 Gauge 2 3/4 inch Remington Plastic Shells (STS) <small>continued</small> |          |          |               |  |                    |                    |          |
|---|----------|----------|---------------|--|--------------------|--------------------|----------|
| Shot  | Powder   | Primer   | Wad           | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                    |                    |          |
| (oz)  |          |          |               | 1155 fps   | 1200 fps           | 1250 fps           | 1290 fps |
| 7/8   | 20/28    | Rem 209P | Orange Duster |  | 15.5 grs 10110 psi | 16.5 grs 10950 psi |          |
| 7/8   | 20/28    | Rem 209P | WAA 20        |  | 15.5 grs 9690 psi  | 16.5 grs 10970 psi |          |
| 7/8   | 20/28    | Rem 209P | RXP 20        |  | 15.5 grs 9310 psi  | 16.5 grs 10180 psi |          |
| 7/8   | 20/28    | Rem 209P | CB 1078-20    |  | 15.5 grs 10060 psi | 16.5 grs 10720 psi |          |
| 7/8   | 20/28    | Rem 209P | Versalite     |  | 15.5 grs 9580 psi  | 16.5 grs 10860 psi |          |
| 7/8   | 20/28    | Win 209  | CB 1078-20    |  | 15.5 grs 10010 psi |                    |          |
| 7/8   | 20/28    | Win 209  | Windjammer    |  | 15.5 grs 9150 psi  |                    |          |
| 7/8   | 20/28    | Win 209  | WAA 20        |  | 15.5 grs 10620 psi |                    |          |
| 7/8   | 20/28    | Win 209  | RXP 20        |  | 15.5 grs 10110 psi |                    |          |
| 7/8   | 20/28    | Win 209  | Orange Duster |  | 15.5 grs 10550 psi |                    |          |
| 7/8   | Unique   | Rem 209P | RXP 20        | 15.5 grs 10000 psi                                       | 16.5 grs 10700 psi |                    |          |
| 7/8   | Unique   | Rem 209P | CB 1078-20    | 15.5 grs 9500 psi  | 16.5 grs 10600 psi |                    |          |
| 7/8   | Unique   | Rem 209P | Orange Duster | 16.5 grs 7700 psi  | 17.5 grs 8100 psi  |                    |          |
| 7/8   | Unique   | Rem 209P | 20S1          | 15.5 grs 10000 psi                                       | 16.5 grs 10800 psi |                    |          |
| 7/8   | Unique   | Rem 209P | Versalite     |  | 16.5 grs 10200 psi |                    |          |
| 7/8   | Unique   | Rem 209P | WAA 20        |  | 16.5 grs 10900 psi |                    |          |
| 7/8   | Unique   | Rem 209P | Windjammer    |  | 16.0 grs 10400 psi |                    |          |
| 7/8   | Unique   | CCI 209  | RXP 20        |  | 16.5 grs 9900 psi  |                    |          |
| 7/8   | Unique   | CCI 209M | RXP 20        | 15.5 grs 11000 psi                                       | 16.0 grs 11300 psi |                    |          |
| 7/8   | Unique   | Fio 616  | RXP 20        | 16.0 grs 10700 psi                                       | 16.5 grs 11200 psi |                    |          |
| 7/8   | Unique   | Win 209  | RXP 20        |  | 16.5 grs 11300 psi |                    |          |
| 7/8   | Herco    | Rem 209P | RXP 20        |  | 17.0 grs 10600 psi |                    |          |
| 7/8   | Herco    | Rem 209P | CB 1078-20    | 16.0 grs 9800 psi  | 17.5 grs 9800 psi  |                    |          |
| 7/8   | Herco    | Rem 209P | 20S1          | 16.0 grs 10000 psi                                       | 17.0 grs 10500 psi |                    |          |
| 7/8   | Herco    | Rem 209P | Versalite     |  | 17.5 grs 10400 psi |                    |          |
| 7/8   | Herco    | Rem 209P | WAA 20        |  | 17.0 grs 10700 psi |                    |          |
| 7/8   | Herco    | Rem 209P | Windjammer    |  | 17.0 grs 10100 psi |                    |          |
| 7/8   | Herco    | CCI 209  | RXP 20        |  | 17.5 grs 9400 psi  |                    |          |
| 7/8   | Herco    | CCI 209M | RXP 20        | 16.5 grs 10500 psi                                       | 17.0 grs 10800 psi |                    |          |
| 7/8   | Herco    | Fio 616  | RXP 20        | 16.5 grs 10100 psi                                       | 17.0 grs 10700 psi |                    |          |
| 7/8   | Herco    | Win 209  | RXP 20        |  | 17.0 grs 10600 psi |                    |          |
| 1   | Herco    | Rem 209P | WAA20F1       | 17.5 grs 11500 psi                                       |                    |                    |          |
| 1   | Blue Dot | CCI 209  | SP 20         | 22.0 grs 9500 psi  | 23.0 grs 10300 psi |                    |          |
| 1   | Blue Dot | CCI 209M | SP 20         | 21.5 grs 10500 psi                                       | 22.5 grs 10900 psi |                    |          |
| 1   | Blue Dot | Fio 616  | SP 20         | 22.5 grs 9800 psi  | 23.5 grs 11000 psi |                    |          |
| 1   | Blue Dot | Rem 209P | SP 20         | 21.5 grs 9000 psi  | 24.0 grs 11100 psi |                    |          |

20 Gauge Shotgun Load Data continued

| 20 Gauge 2 3/4 inch Remington Plastic Shells (STS) continued |                 |          |               |  |                    |                    |                   |  |
|--|-----------------|----------|---------------|--|--------------------|--------------------|-------------------|--|
| Shot   | Powder          | Primer   | Wad           | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                    |                    |                   |  |
| (oz)   |                 |          |               | 1155 fps   | 1200 fps           | 1250 fps           | 1290 fps          |  |
| 1  | Blue Dot        | Rem 209P | WAA20F1       | 21.5 grs 9000 psi  | 23.5 grs 10900 psi |                    |                   |  |
| 1  | Blue Dot        | Win 209  | SP 20         | 21.5 grs 10600 psi                                       | 22.0 grs 11100 psi |                    |                   |  |
| 20 Gauge 2 3/4 inch Winchester AA Plastic Shells             |                 |          |               |  |                    |                    |                   |  |
| Shot   | Powder          | Primer   | Wad           | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                    |                    |                   |  |
| (oz)   |                 |          |               | 1155 fps   | 1200 fps           | 1250 fps           | 1290 fps          |  |
| 3/4  | American Select | Win 209  | WAA 20        |  | 13.5 grs 10510 psi | 14.5 grs 11800 psi |                   |  |
| 3/4  | American Select | Win 209  | CB 1078-20    |  | 14.0 grs 10540 psi | 14.5 grs 11800 psi |                   |  |
| 3/4  | Green Dot       | Win 209  | WAA 20        |  | 14.5 grs 9940 psi  | 15.0 grs 10650 psi |                   |  |
| 3/4  | Green Dot       | Win 209  | CB 1078-20    |  | 14.0 grs 9930 psi  | 15.0 grs 10860 psi |                   |  |
| 3/4  | Unique          | Win 209  | CB 1078-20    |  |                    |                    | 17.0 grs 9980 psi |  |
| 7/8  | 20/28           | Win 209  | WAA 20        |  | 15.5 grs 8880 psi  | 16.5 grs 9740 psi  |                   |  |
| 7/8  | 20/28           | Win 209  | CB 1078-20    |  | 15.7 grs 9370 psi  | 16.7 grs 10490 psi |                   |  |
| 7/8  | 20/28           | Win 209  | Windjammer    |  | 15.7 grs 9470 psi  | 16.7 grs 10690 psi |                   |  |
| 7/8  | 20/28           | Win 209  | Versalite     |  | 16.0 grs 9430 psi  | 17.0 grs 10420 psi |                   |  |
| 7/8  | 20/28           | Win 209  | Orange Duster |  | 15.7 grs 9750 psi  | 16.7 grs 10630 psi |                   |  |
| 7/8  | 20/28           | Rem 209P | CB 1078-20    |  | 15.5 grs 9980 psi  |                    |                   |  |
| 7/8  | 20/28           | Rem 209P | Windjammer    |  | 15.5 grs 9580 psi  |                    |                   |  |
| 7/8  | 20/28           | Rem 209P | Versalite     |  | 15.5 grs 9400 psi  |                    |                   |  |
| 7/8  | 20/28           | Rem 209P | Orange Duster |  | 15.5 grs 9990 psi  |                    |                   |  |
| 7/8  | 20/28           | Rem 209P | WAA 20        |  | 15.5 grs 9890 psi  |                    |                   |  |
| 7/8  | Unique          | Win 209  | WAA 20        | 15.0 grs 10200 psi                                       |                    |                    |                   |  |
| 7/8  | Unique          | Win 209  | CB 1078-20    | 15.0 grs 10200 psi                                       | 16.0 grs 11200 psi |                    |                   |  |
| 7/8  | Unique          | Win 209  | RXP 20        | 15.0 grs 8700 psi  | 16.0 grs 9000 psi  |                    |                   |  |
| 7/8  | Unique          | Win 209  | WAA 20F1      | 15.0 grs 11000 psi                                       | 15.5 grs 11200 psi |                    |                   |  |
| 7/8  | Herco           | Win 209  | CB 1078-20    | 16.0 grs 10500 psi                                       | 16.5 grs 11000 psi |                    |                   |  |
| 7/8  | Herco           | Win 209  | WAA 20F1      | 16.0 grs 11000 psi                                       |                    |                    |                   |  |
| 1  | Herco           | Win 209  | RXP 20        | 16.5 grs 9600 psi  |                    |                    |                   |  |
| 1  | Herco           | Win 209  | SP 20         | 16.5 grs 10000 psi                                       |                    |                    |                   |  |
| 1  | 20/28           | Win 209  | RXP 20        |  | 16.5 grs 11620psi  |                    |                   |  |
| 1  | Blue Dot        | Win 209  | RXP 20        |  |                    | 23.0 grs 11300 psi |                   |  |
| 1  | Blue Dot        | Win 209  | SP 20         |  |                    | 23.5 grs 11400 psi |                   |  |
| 1  | Blue Dot        | Win 209  | WAA 20F1      |  |                    | 23.0 grs 11500 psi |                   |  |

20 Gauge Shotgun Load Data continued

| 20 Gauge 2 3/4 inch Federal® Plastic Target Shells  |           |          |               |  |                    |                    |                    |  |
|---|-----------|----------|---------------|--|--------------------|--------------------|--------------------|--|
| Shot  | Powder    | Primer   | Wad           | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                    |                    |                    |  |
| (oz)  |           |          |               | 1155 fps   | 1200 fps           | 1250 fps           | 1290 fps           |  |
| 7/8   | 20/28     | Fed 209A | 20S1          |  | 16.5 grs 8370 psi  | 17.2 grs 8970 psi  |                    |  |
| 7/8   | 20/28     | Fed 209A | Windjammer    |  | 16.5 grs 8210 psi  | 17.5 grs 8690 psi  |                    |  |
| 7/8   | 20/28     | CCI 209  | 20S1          |  | 16.0 grs 8350 psi  |                    |                    |  |
| 7/8   | 20/28     | CCI 209  | RXP 20        |  |                    | 17.5 grs 10210 psi |                    |  |
| 7/8   | 20/28     | CCI 209  | Windjammer    |  | 17.0 grs 8060 psi  | 18.0 grs 8480 psi  |                    |  |
| 7/8   | Green Dot | Fed 209A | Versalite     |  | 15.5 grs 11470 psi |                    |                    |  |
| 7/8   | Green Dot | Fed 209A | Windjammer    |  | 15.5 grs 11350 psi |                    |                    |  |
| 7/8   | Green Dot | Fed 209A | WAA 20        |  | 15.0 grs 10960 psi |                    |                    |  |
| 7/8   | Green Dot | CCI 209M | 20S1          | 14.5 grs 9100 psi  | 16.5 grs 9300 psi  |                    |                    |  |
| 7/8   | Unique    | Fed 209A | RXP 20        |  | 16.5 grs 9170 psi  |                    |                    |  |
| 7/8   | Unique    | Fed 209A | Windjammer    |  | 17.0 grs 9880 psi  |                    |                    |  |
| 7/8   | Unique    | Fed 209A | WAA 20        |  | 16.5 grs 9450 psi  |                    |                    |  |
| 7/8   | Unique    | Fed 209A | Versalite     |  | 17.0 grs 9990 psi  |                    |                    |  |
| 7/8   | Unique    | CCI 209M | 20S1          | 16.0 grs 8700 psi  | 17.0 grs 9100 psi  |                    |                    |  |
| 7/8   | Herco     | Fed 209A | WAA 20        |  | 17.5 grs 10070 psi |                    |                    |  |
| 7/8   | Herco     | Fed 209A | RXP 20        |  | 17.5 grs 9420 psi  |                    |                    |  |
| 7/8   | Herco     | Fed 209A | Windjammer    |  | 18.0 grs 9880 psi  |                    |                    |  |
| 7/8   | Herco     | CCI 209M | 20S1          |  | 17.5 grs 7600 psi  | 18.5 grs 9800 psi  |                    |  |
| 20 Gauge 2 3/4 inch Remington Plastic Shells (STS)  |           |          |               |  |                    |                    |                    |  |
| Shot  | Powder    | Primer   | Wad           | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                    |                    |                    |  |
| (oz)  |           |          |               | 1300 fps   | 1350 fps           | 1400 fps           | 1425 fps           |  |
| 7/8   | Pro Reach | Rem 209A | Orange Duster | 20.2 grs 8380 psi  | 20.9 grs 8760 psi  |                    | 22.4 grs 11220 psi |  |
| 20 Gauge 2 3/4 inch Winchester AA-HS Plastic Shells |           |          |               |  |                    |                    |                    |  |
| Shot  | Powder    | Primer   | Wad           | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                    |                    |                    |  |
| (oz)  |           |          |               | 1300 fps   | 1350 fps           | 1400 fps           | 1425 fps           |  |
| 7/8   | Pro Reach | Win 209  | 20S1          |  | 19.2 grs 11180 ps  |                    |                    |  |
| 7/8   | Pro Reach | Win 209  | RXP 20        |  |                    | 21.0 grs 10990 psi |                    |  |
| 7/8   | Pro Reach | Win 209  | Orange Duster | 18.9 grs 10720 psi                                       | 19.5 grs 10960 psi |                    |                    |  |
| 7/8   | Pro Reach | Cheddite | Orange Duster | 18.8 grs 10420 psi                                       | 19.3 grs 11320 psi |                    |                    |  |
| 20 Gauge 2 3/4 inch Federal® Plastic Target Shells  |           |          |               |  |                    |                    |                    |  |
| Shot  | Powder    | Primer   | Wad           | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                    |                    |                    |  |
| (oz)  |           |          |               | 1300 fps   | 1350 fps           | 1400 fps           | 1425 fps           |  |
| 7/8   | Pro Reach | Fed 209A | RXP 20        |  |                    |                    | 22.8 grs 11090 psi |  |
| 7/8   | Pro Reach | Fed 209A | Win AA20      | 20.1 grs 7970 psi  | 21.4 grs 9270 psi  | 21.9 grs 10830 psi |                    |  |
| 7/8   | Pro Reach | Fed 209A | 20S1          | 20.1 grs 8490 psi  | 20.9 grs 9280 psi  | 22.0 grs 11140 psi |                    |  |

| 28 GAUGE SHOTSHELL LOAD DATA                                |           |          |             |  |                    |                    |
|---|-----------|----------|-------------|--|--------------------|--------------------|
| 28 Gauge 2 3/4 inch Remington Plastic Shells (STS, Premier) |           |          |             |  |                    |                    |
| Shot (oz)   | Powder    | Primer   | Wad         | Charge Weight(grains)/ Velocity (fps) & Pressure (psi) |                    |                    |
|   |           |          |             | 1200 fps   | 1250 fps           | 1290 fps           |
| 3/4   | 20/28     | Rem 209P | PT-28       | 12.8 grs 11830 psi                                     |                    |                    |
| 3/4   | 20/28     | Rem 209P | Duster 2834 | 12.8 grs 11200 psi                                     | 13.1 grs 12360 psi |                    |
| 3/4   | 20/28     | Rem 209P | CB 5034-HS  | 12.4 grs 11620 psi                                     |                    |                    |
| 3/4   | Unique    | Rem 209P | PT-28       | 13.3 grs 11260 psi                                     |                    |                    |
| 3/4   | Unique    | Rem 209P | 28S1        | 13.2 grs 11520 psi                                     |                    |                    |
| 3/4   | Unique    | Rem 209P | Duster 2834 | 14.0 grs 9600 psi                                      |                    |                    |
| 3/4   | Unique    | Rem 209P | PC          | 14.0 grs 11200 psi                                     |                    |                    |
| 3/4   | Herco     | Win 209  | PT-28       | 13.9 grs 11700 psi                                     |                    |                    |
| 3/4   | Herco     | Rem 209P | PT-28       | 14.5 grs 11360 psi                                     |                    |                    |
| 3/4   | Herco     | Rem 209P | 28S1        | 14.0 grs 11030 psi                                     |                    |                    |
| 3/4   | Herco     | Rem 209P | Duster 2834 | 14.8 grs 9600 psi                                      |                    |                    |
| 3/4   | Herco     | Rem 209P | PC          | 14.5 grs 10800 psi                                     |                    |                    |
| 28 Gauge 2 3/4 inch Winchester AA (HS) Plastic Shells       |           |          |             |  |                    |                    |
| Shot (oz)   | Powder    | Primer   | Wad         | Charge Weight(grains)/ Velocity (fps) & Pressure (psi) |                    |                    |
|   |           |          |             | 1200 fps   | 1250 fps           | 1290 fps           |
| 3/4   | 20/28     | Win 209  | Duster 2834 | 13.0 grs 9880 psi                                      | 14.0 grs 11110 psi |                    |
| 3/4   | 20/28     | Win 209  | CB 5034-HS  | 13.0 grs 10580 psi                                     | 13.5 grs 11690 psi |                    |
| 3/4   | 20/28     | Win 209  | PT-28       | 13.2 grs 10550 psi                                     | 14.1 grs 12160 psi |                    |
| 3/4   | 20/28     | Win 209  | Win AA -HS  | 13.0 grs 11670 psi                                     |                    |                    |
| 3/4   | Unique    | Win 209  | Win AA -HS  | 13.1 grs 11300 psi                                     |                    |                    |
| 3/4   | Herco     | Win 209  | Win AA -HS  | 14.0 grs 10900 psi                                     |                    |                    |
| 28 Gauge 2 3/4 inch Remington Plastic Shells (STS)          |           |          |             |  |                    |                    |
| Shot (oz)   | Powder    | Primer   | Wad         | Charge Weight(grains)/ Velocity (fps) & Pressure (psi) |                    |                    |
|   |           |          |             | 1300 fps   | 1350 fps           | 1400fps            |
| 3/4   | Pro Reach | Rem 209P | Duster 2834 | 15.8 grs 10110 psi                                     | 16.8 grs 11370 psi |                    |
| 3/4   | Pro Reach | Rem 209P | PT 28       | 15.7 grs 11540 psi                                     |                    |                    |
| 3/4   | Pro Reach | Cheddite | Duster 2834 | 15.9 grs 10420 psi                                     | 16.6 grs 11580 psi |                    |
| 3/4   | Pro Reach | Cheddite | PT 28       | 15.7 grs 10860 psi                                     | 16.1 grs 11750 psi |                    |
| 28 Gauge 2 3/4 inch Winchester AA-HS Plastic Shells         |           |          |             |  |                    |                    |
| Shot (oz)   | Powder    | Primer   | Wad         | Charge Weight(grains)/ Velocity (fps) & Pressure (psi) |                    |                    |
|   |           |          |             | 1300 fps   | 1350 fps           | 1400fps            |
| 3/4   | Pro Reach | Cheddite | Duster 2834 | 16.4 grs 8540 psi                                      | 17.2 grs 9980 psi  |                    |
| 3/4   | Pro Reach | Cheddite | CB 1034     | 17.0 grs 8640 psi                                      |                    |                    |
| 3/4   | Pro Reach | Win 209  | Duster 2834 |  | 17.5 grs 9790 psi  | 18.0 grs 11560 psi |
| 3/4   | Pro Reach | Win 209  | CB 1034     | 17.0 grs 9030 psi                                      | 17.5 grs 10550 psi |                    |

28 Gauge Shotshell Load Data continued

| 28 Gauge 2 3/4 inch Federal® Plastic Target Shells |           |          |             |  |                    |         |
|--|-----------|----------|-------------|--|--------------------|---------|
| Shot (oz)  | Powder    | Primer   | Wad         | Charge Weight(grains)/ Velocity (fps) & Pressure (psi) |                    |         |
|  |           |          |             | 1300 fps   | 1350 fps           | 1400fps |
| 3/4  | Pro Reach | Cheddite | Duster 2834 | 16.4 grs 8230 psi                                      | 17.1 grs 10090 psi |         |
| 3/4  | Pro Reach | Cheddite | 28S1        | 16.0 grs 11080 psi                                     | 16.5 grs 11770 psi |         |
| 3/4  | Pro Reach | Fed 209A | Duster 2834 | 16.2 grs 9370 psi                                      | 16.8 grs 10670 psi |         |
| 3/4  | Pro Reach | Fed 209A | 28S1        | 15.9 grs 11780 psi                                     | 16.1 grs 12040 psi |         |

| 410 BORE SHOTSHELL LOAD DATA                                |        |             |             |  |                    |                       |
|---|--------|-------------|-------------|--|--------------------|-----------------------|
| 410 Bore 2 1/2 inch Remington Plastic Shells (STS, Premier) |        |             |             |  |                    |                       |
| Shot (oz)   | Powder | Primer      | Wad         | Charge Weight(grains)/ Velocity (fps) & Pressure (psi) |                    |                       |
|   |        |             |             | 1200 fps   | 1230 fps           |                       |
| 1/2   | 410    | Rem 209 STS | SP410       | 12.0 grs 9500 psi                                      | 12.7 grs 9700 psi  |                       |
| 1/2   | 410    | Rem 209 STS | Fed 410 SC  | 12.2 grs 10700 psi                                     |                    |                       |
| 1/2   | 410    | Rem 209 STS | WAA41       | 12.3 grs 8800 psi                                      |                    |                       |
| 1/2   | 410    | Rem 209 STS | CB 1050-41  | 12.3 grs 8700 psi                                      |                    |                       |
| 1/2   | 410    | Rem 209 STS | Duster 4150 |  | 12.8 grs 9900 psi  |                       |
| 1/2   | 410    | CCI 209M    | SP410       | 12.2 grs 9800 psi                                      |                    |                       |
| 1/2   | 2400   | CCI 209M    | SP410       | 13.5 grs 11000 psi                                     |                    |                       |
| 410 Bore 2 1/2 inch Winchester AA Plastic Shells            |        |             |             |  |                    |                       |
| 1/2   | 410    | CCI 209M    | WAA41       | 11.5 grs 11100 psi                                     | 11.9 grs 11800 psi |                       |
| 1/2   | 410    | Win 209     | CB 1050-41  | 11.5 grs 10100 psi                                     | 11.9 grs 10900 psi |                       |
| 1/2   | 410    | Win 209     | Duster 4150 | 11.4 grs 11100 psi                                     |                    |                       |
| 1/2   | 410    | Win 209     | SP410       | 11.5 grs 10800 psi                                     |                    |                       |
| 1/2   | 2400   | Win 209     | WAA41       | 13.0 grs 11700 psi                                     |                    |                       |
| 410 Bore 2 1/2 inch Winchester AA (HS) Plastic Shells       |        |             |             |  |                    |                       |
| 1/2   | 410    | Win 209     | Fed 209 SC  | 12.5 grs 10415 psi                                     |                    |                       |
| 1/2   | 410    | Win 209     | Win AA41HS  | 12.0 grs 10570 psi                                     |                    |                       |
| 1/2   | 410    | Win 209     | Duster 4150 | 12.0 grs 10740 psi                                     |                    |                       |
| 410 Bore 2 1/2 inch Federal® Plastic Target Shells          |        |             |             |  |                    |                       |
| 1/2   | 410    | CCI 209M    | Fed 410 SC  | 11.5 grs 10600 psi                                     |                    |                       |
| 1/2   | 410    | Fed 209A    | WAA41       | 11.5 grs 10500 psi                                     | 11.8 grs 11500 psi | 1/16" spacer required |
| 1/2   | 410    | Fed 209A    | CB 1050-41  | 11.5 grs 10500 psi                                     | 11.8 grs 11400 psi | 1/16" spacer required |
| 1/2   | 410    | Fed 209A    | Duster 4150 | 11.5 grs 10000 psi                                     | 11.9 grs 11800 psi |                       |
| 1/2   | 410    | Fed 209A    | SP410       | 11.5 grs 10700 psi                                     | 11.8 grs 11800 psi | 1/16" spacer required |
| 1/2   | 410    | Fed 209A    | Fed 410 SC  | 11.5 grs 10500 psi                                     | 11.9 grs 12000 psi |                       |

CENTERFIRE METALLIC LOADS

| COWBOY ACTION HANDGUN LOAD DATA |                 |           |            |        |         |          |
|---------------------------------|-----------------|-----------|------------|--------|---------|----------|
| 32 S&W Long                     |                 |           |            |        |         |          |
| Cartridge/Bullet                | Powder          | Primer    | Case       | OAL    | Max Wgt | Velocity |
|                                 |                 |           |            |        | grains  | fps      |
| 90 gr RCBS mould # 82303        | Bullseye        | CCI 500   | Remington  | 1.190" | 2.3     | 794      |
| 90 gr RCBS mould # 82303        | Red Dot         | CCI 500   | Remington  | 1.190" | 2.3     | 769      |
| 98 gr RCBS mould # 82061        | Bullseye        | CCI 500   | Remington  | 1.280" | 2.3     | 770      |
| 98 gr RCBS mould # 82061        | Unique          | CCI 500   | Remington  | 1.280" | 2.8     | 769      |
| 98 gr RCBS mould # 82061        | 2400            | CCI 500   | Remington  | 1.280" | 5.6     | 801      |
| 32-20 Win                       |                 |           |            |        |         |          |
| 98 gr RCBS mould # 82061        | Bullseye        | CCI 500   | Starline   | 1.530" | 2.9     | 937      |
| 98 gr RCBS mould # 82061        | Unique          | CCI 500   | Starline   | 1.530" | 3.5     | 969      |
| 98 gr RCBS mould # 82061        | Power Pistol    | CCI 500   | Starline   | 1.530" | 4.4     | 1033     |
| 38 Special                      |                 |           |            |        |         |          |
| 125 gr Oregon Trails lead       | Bullseye        | Rem 1 1/2 | Remington  | 1.450" | 4.8     | 1024     |
| 125 gr Oregon Trails lead       | American Select | Rem 1 1/2 | Remington  | 1.450" | 4.7     | 989      |
| 125 gr Meister RNFP             | Red Dot         | Rem 1 1/2 | Remington  | 1.450" | 4.6     | 1025     |
| 125 gr Meister RNFP             | Unique          | Rem 1 1/2 | Remington  | 1.450" | 6.0     | 1075     |
| 140 gr Hornady FP lead          | Bullseye        | Rem 1 1/2 | Remington  | 1.450" | 4.5     | 945      |
| 140 gr Hornady FP lead          | Red Dot         | Rem 1 1/2 | Remington  | 1.450" | 4.5     | 960      |
| 140 gr Hornady FP lead          | American Select | Rem 1 1/2 | Remington  | 1.450" | 4.5     | 988      |
| 140 gr Hornady FP lead          | Unique          | Rem 1 1/2 | Remington  | 1.450" | 5.5     | 985      |
| 147 gr RCBS mould # 82077       | Bullseye        | CCI 500   | Speer      | 1.530" | 3.5     | 838      |
| 147 gr RCBS mould # 82077       | Red Dot         | CCI 500   | Speer      | 1.530" | 3.4     | 794      |
| 147 gr RCBS mould # 82077       | Unique          | CCI 500   | Speer      | 1.530" | 4.6     | 820      |
| 357 Mag                         |                 |           |            |        |         |          |
| 125 gr Oregon Trails lead       | American Select | Fed 100   | Remington  | 1.580" | 3.9     | 856      |
| 140 gr Hornady FP lead          | American Select | Fed 100   | Remington  | 1.540" | 3.6     | 825      |
| 140 gr Hornady FP lead          | Unique          | Fed 100   | Remington  | 1.540" | 4.0     | 820      |
| 158 gr RN lead                  | American Select | Fed 100   | Remington  | 1.585" | 4.0     | 840      |
| 158 gr RN lead                  | Unique          | Fed 100   | Remington  | 1.585" | 4.5     | 859      |
| 38-40 Win                       |                 |           |            |        |         |          |
| 180 gr RCBS mould # 82306       | Bullseye        | CCI 300   | Winchester | 1.575" | 5.3     | 810      |
| 180 gr RCBS mould # 82306       | Red Dot         | CCI 300   | Winchester | 1.575" | 5.2     | 817      |
| 180 gr RCBS mould # 82306       | American Select | CCI 300   | Winchester | 1.575" | 5.2     | 788      |
| 180 gr RCBS mould # 82306       | Unique          | CCI 300   | Winchester | 1.575" | 7.4     | 846      |

Cowboy Action Handgun Load Data continued

| 44 Russian                |                 |         |            |        |         |          |
|---------------------------|-----------------|---------|------------|--------|---------|----------|
| Cartridge/Bullet          | Powder          | Primer  | Case       | OAL    | Max Wgt | Velocity |
|                           |                 |         |            |        | grains  | fps      |
| 200 gr RCBS mould # 82307 | Bullseye        | CCI 300 | Starline   | 1.245" | 4.0     | 826      |
| 200 gr RCBS mould # 82307 | Red Dot         | CCI 300 | Starline   | 1.245" | 3.8     | 796      |
| 200 gr RCBS mould # 82307 | American Select | CCI 300 | Starline   | 1.245" | 3.7     | 763      |
| 200 gr RCBS mould # 82307 | Unique          | CCI 300 | Starline   | 1.245" | 5.4     | 887      |
| 44 S&W Special            |                 |         |            |        |         |          |
| 200 gr RCBS mould # 82307 | Bullseye        | CCI 300 | Remington  | 1.435" | 6.4     | 1032     |
| 200 gr RCBS mould # 82307 | Red Dot         | CCI 300 | Remington  | 1.435" | 6.0     | 999      |
| 200 gr RCBS mould # 82307 | American Select | CCI 300 | Remington  | 1.435" | 5.8     | 933      |
| 200 gr RCBS mould # 82307 | Unique          | CCI 300 | Remington  | 1.435" | 8.7     | 1143     |
| 44-40 Win                 |                 |         |            |        |         |          |
| 200 gr RCBS mould # 82307 | Bullseye        | CCI 300 | Remington  | 1.580" | 6.1     | 885      |
| 200 gr RCBS mould # 82307 | Red Dot         | CCI 300 | Remington  | 1.580" | 5.9     | 866      |
| 200 gr RCBS mould # 82307 | American Select | CCI 300 | Remington  | 1.580" | 6.0     | 856      |
| 200 gr RCBS mould # 82307 | Unique          | CCI 300 | Remington  | 1.580" | 8.6     | 951      |
| 45 S&W Schofield          |                 |         |            |        |         |          |
| 230 gr RCBS mould # 82308 | Bullseye        | CCI 300 | Starline   | 1.410" | 4.3     | 697      |
| 230 gr RCBS mould # 82308 | American Select | CCI 300 | Starline   | 1.410" | 4.3     | 707      |
| 230 gr RCBS mould # 82308 | Unique          | CCI 300 | Starline   | 1.410" | 6.1     | 728      |
| 45 Colt                   |                 |         |            |        |         |          |
| 230 gr RCBS mould # 82308 | Bullseye        | CCI 300 | Winchester | 1.585" | 6.0     | 815      |
| 230 gr RCBS mould # 82308 | American Select | CCI 300 | Winchester | 1.585" | 6.0     | 782      |
| 230 gr RCBS mould # 82308 | Unique          | CCI 300 | Winchester | 1.585" | 8.5     | 850      |

| PISTOL/REVOLVER LOAD DATA |           |         |           |        |         |          |
|---------------------------|-----------|---------|-----------|--------|---------|----------|
| 221 Fireball              |           |         |           |        |         |          |
| Cartridge/Bullet          | Powder    | Primer  | Case      | OAL    | Max Chg | Velocity |
|                           |           |         |           |        | grains  | fps      |
| 45 gr Speer               | 2400      | CCI 400 | Remington | 1.830" | 15.0    | 2762     |
| 45 gr Speer               | Reloder 7 | CCI 400 | Remington | 1.830" | 18.3    | 2775     |
| 50 gr Speer TNT           | 2400      | CCI 400 | Remington | 1.830" | 14.5    | 2693     |
| 50 gr Speer TNT           | Reloder 7 | CCI 400 | Remington | 1.830" | 17.9    | 2638     |
| 52 gr Speer HP            | 2400      | CCI 400 | Remington | 1.830" | 14.3    | 2607     |
| 52 gr Speer HP            | Reloder 7 | CCI 400 | Remington | 1.830" | 17.7    | 2606     |
| 25 Auto                   |           |         |           |        |         |          |
| 35 gr Speer HP            | Bullseye  | CCI 500 | Speer     | .870"  | 1.7     | 1040     |
| 50 gr Speer TMJ RN        | Bullseye  | CCI 500 | Speer     | .870"  | 1.3     | 812      |



Pistol/Revolver Load Data continued

| 32 Auto           |              |         |            |        |         |          |
|-------------------|--------------|---------|------------|--------|---------|----------|
| Cartridge/Bullet  | Powder       | Primer  | Case       | OAL    | Max chg | Velocity |
|                   |              |         |            |        | grains  | fps      |
| 60 gr Speer GDHP  | Bullseye     | CCI 500 | Speer      | .940"  | 2.6     | 1030     |
| 60 gr Speer GDHP  | Unique       | CCI 500 | Speer      | .940"  | 3.2     | 971      |
| 60 gr Speer GDHP  | Power Pistol | CCI 500 | Speer      | .940"  | 3.6     | 1030     |
| 32 S&W Long       |              |         |            |        |         |          |
| 98 gr HBWC        | Bullseye     | CCI 500 | Remington  | .920"  | 1.8     | 777      |
| 32 H&R Magnum     |              |         |            |        |         |          |
| 98 gr HBWC        | Bullseye     | CCI 500 | Federal    | .940"  | 3.9     | 1162     |
| 85 gr Speer JHP   | Unique       | CCI 500 | Federal    | 1.340" | 4.7     | 1240     |
| 100 gr Speer JHP  | Bullseye     | CCI 500 | Federal    | 1.345" | 3.6     | 1000     |
| 100 gr Speer JHP  | Unique       | CCI 500 | Federal    | 1.345" | 4.4     | 1074     |
| 100 gr Speer JHP  | 2400         | CCI 500 | Federal    | 1.345" | 7.7     | 1091     |
| 98 gr HBWC        | Bullseye     | CCI 500 | Federal    | 1.075  | 2.3     | 810      |
| 380 Auto          |              |         |            |        |         |          |
| 90 gr Speer GDHP  | Bullseye     | CCI 500 | Winchester | .970"  | 3.4     | 981      |
| 90 gr Speer GDHP  | Unique       | CCI 500 | Winchester | .970"  | 4.6C    | 1034     |
| 90 gr Speer GDHP  | Power Pistol | CCI 500 | Winchester | .970"  | 4.8C    | 1020     |
| 9mm Luger         |              |         |            |        |         |          |
| 115 gr Speer GDHP | Bullseye     | CCI 500 | Speer      | 1.125" | 4.7     | 1144     |
| 115 gr Speer GDHP | Am. Select   | CCI 500 | Speer      | 1.125" | 5.4     | 1102     |
| 115 gr Speer GDHP | Unique       | CCI 500 | Speer      | 1.125" | 6.3     | 1244     |
| 115 gr Speer GDHP | Power Pistol | CCI 500 | Speer      | 1.125" | 6.7     | 1212     |
| 115 gr Speer GDHP | Blue Dot     | CCI 500 | Speer      | 1.125" | 8.5     | 1258     |
| 124 gr Speer GDHP | Bullseye     | CCI 500 | Speer      | 1.120" | 4.4     | 1059     |
| 124 gr Speer GDHP | Am. Select   | CCI 500 | Speer      | 1.120" | 5.0     | 1053     |
| 124 gr Speer GDHP | Unique       | CCI 500 | Speer      | 1.120" | 5.8     | 1180     |
| 124 gr Speer GDHP | Blue Dot     | CCI 500 | Speer      | 1.120" | 7.9     | 1238     |
| 147 gr Speer GDHP | Unique       | CCI 500 | Speer      | 1.130" | 4.3     | 954      |
| 147 gr Speer GDHP | Power Pistol | CCI 500 | Speer      | 1.130" | 5.0     | 975      |
| 147 gr Speer GDHP | Blue Dot     | CCI 500 | Speer      | 1.130" | 5.8     | 1001     |
| 357 SIG           |              |         |            |        |         |          |
| 125 gr Speer GDHP | Unique       | CCI 500 | Speer      | 1.135" | 8.0     | 1344     |
| 125 gr Speer GDHP | Herco        | CCI 500 | Speer      | 1.135" | 8.1     | 1277     |
| 125 gr Speer GDHP | Blue Dot     | CCI 500 | Speer      | 1.135" | 11.0C   | 1416     |
| 147 gr Speer GDHP | Unique       | CCI 500 | Speer      | 1.135" | 6.6     | 1101     |
| 147 gr Speer GDHP | Power Pistol | CCI 500 | Speer      | 1.135" | 7.5     | 1152     |
| 147 gr Speer GDHP | Blue Dot     | CCI 500 | Speer      | 1.135" | 8.8     | 1218     |

Pistol/Revolver Load Data continued

| 38 Super Auto +P  |                 |         |            |        |         |          |
|-------------------|-----------------|---------|------------|--------|---------|----------|
| Cartridge/Bullet  | Powder          | Primer  | Case       | OAL    | Max Chg | Velocity |
|                   |                 |         |            |        | grains  | fps      |
| 115 gr Speer GDHP | Herco           | CCI 500 | Winchester | 1.260" | 7.8C    | 1276     |
| 115 gr Speer GDHP | Blue Dot        | CCI 500 | Winchester | 1.260" | 10.0C   | 1362     |
| 124 gr Speer GDHP | Bullseye        | CCI 500 | Winchester | 1.260" | 5.2     | 1158     |
| 124 gr Speer GDHP | Unique          | CCI 500 | Winchester | 1.260" | 6.2     | 1208     |
| 124 gr Speer GDHP | Herco           | CCI 500 | Winchester | 1.260" | 7.3     | 1272     |
| 124 gr Speer GDHP | Blue Dot        | CCI 500 | Winchester | 1.260" | 9.2     | 1312     |
| 38 Special        |                 |         |            |        |         |          |
| 148 gr Speer HBWC | Bullseye        | CCI 500 | Speer      | Flush  | 3.1     | 799      |
| 148 gr Speer HBWC | Red Dot         | CCI 500 | Speer      | Flush  | 3.0     | 806      |
| 158 gr Speer LSWC | Bullseye        | CCI 500 | Speer      | 1.440" | 3.5     | 814      |
| 158 gr Speer LSWC | Red Dot         | CCI 500 | Speer      | 1.440" | 3.4     | 793      |
| 158 gr Speer LSWC | Unique          | CCI 500 | Speer      | 1.440" | 4.7     | 815      |
| 158 gr Speer LSWC | Power Pistol    | CCI 500 | Speer      | 1.440" | 5.4     | 948      |
| 110 gr Speer GDHP | Bullseye        | CCI 500 | Speer      | 1.455" | 4.6     | 990      |
| 110 gr Speer GDHP | American Select | CCI 500 | Speer      | 1.455" | 4.3     | 887      |
| 110 gr Speer GDHP | Unique          | CCI 500 | Speer      | 1.455" | 5.8     | 1065     |
| 110 gr Speer GDHP | Power Pistol    | CCI 500 | Speer      | 1.455" | 6.6     | 1074     |
| 125 gr Speer GDHP | Bullseye        | CCI 500 | Speer      | 1.440" | 4.5     | 914      |
| 125 gr Speer GDHP | American Select | CCI 500 | Speer      | 1.440" | 4.1     | 839      |
| 125 gr Speer GDHP | Unique          | CCI 500 | Speer      | 1.440" | 5.7     | 980      |
| 125 gr Speer GDHP | Power Pistol    | CCI 500 | Speer      | 1.440" | 6.1     | 986      |
| 38 Special +P     |                 |         |            |        |         |          |
| 158 gr Speer LSWC | Bullseye        | CCI 500 | Speer      | 1.440" | 3.9     | 874      |
| 158 gr Speer LSWC | Red Dot         | CCI 500 | Speer      | 1.440" | 3.8     | 846      |
| 158 gr Speer LSWC | Unique          | CCI 500 | Speer      | 1.440" | 5.2     | 919      |
| 158 gr Speer LSWC | Power Pistol    | CCI 500 | Speer      | 1.440" | 6.0     | 1037     |
| 110 gr Speer GDHP | Bullseye        | CCI 500 | Speer      | 1.445" | 5.2     | 1098     |
| 110 gr Speer GDHP | American Select | CCI 500 | Speer      | 1.445" | 4.8     | 967      |
| 110 gr Speer GDHP | Unique          | CCI 500 | Speer      | 1.445" | 6.3     | 1117     |
| 110 gr Speer GDHP | Power Pistol    | CCI 500 | Speer      | 1.445" | 7.4     | 1192     |
| 125 gr Speer GDHP | Bullseye        | CCI 500 | Speer      | 1.440" | 4.8     | 1021     |
| 125 gr Speer GDHP | American Select | CCI 500 | Speer      | 1.440" | 4.7     | 931      |
| 125 gr Speer GDHP | Unique          | CCI 500 | Speer      | 1.440" | 6.0     | 1082     |
| 125 gr Speer GDHP | Power Pistol    | CCI 500 | Speer      | 1.440" | 6.8     | 1082     |
| 135 gr Speer GDHP | Unique          | CCI 500 | Speer      | 1.450" | 5.2     | 988      |
| 135 gr Speer GDHP | Power Pistol    | CCI 500 | Speer      | 1.450" | 6.4     | 1065     |
| 146 gr JHP-SWC    | Unique          | CCI 500 | Speer      | 1.370" | 5.1     | 957      |

Pistol/Revolver Load Data continued

| 38 Special +P continued |                 |         |         |        |         |          |
|-------------------------|-----------------|---------|---------|--------|---------|----------|
| Cartridge/Bullet        | Powder          | Primer  | Case    | OAL    | Max Chg | Velocity |
|                         |                 |         |         |        | grains  | fps      |
| 146 gr JHP-SWC          | Power Pistol    | CCI 500 | Speer   | 1.370" | 5.5     | 935      |
| 146 gr JHP-SWC          | Blue Dot        | CCI 500 | Speer   | 1.370" | 7.1     | 1000     |
| 146 gr JHP-SWC          | 2400            | CCI 500 | Speer   | 1.370" | 9.0     | 952      |
| 357 Magnum              |                 |         |         |        |         |          |
| 158 gr Speer LSWC       | Bullseye        | CCI 500 | Speer   | 1.570" | 4.8     | 939      |
| 158 gr Speer LSWC       | Unique          | CCI 500 | Speer   | 1.570" | 6.0     | 1034     |
| 110 gr Speer UCHP       | Bullseye        | CCI 500 | Speer   | 1.575" | 8.7     | 1403     |
| 110 gr Speer UCHP       | Unique          | CCI 500 | Speer   | 1.575" | 9.7     | 1447     |
| 110 gr Speer UCHP       | Power Pistol    | CCI 500 | Speer   | 1.575" | 10.5    | 1451     |
| 110 gr Speer UCHP       | Blue Dot        | CCI 500 | Speer   | 1.575" | 16.0    | 1680     |
| 110 gr Speer UCHP       | 2400            | CCI 500 | Speer   | 1.575" | 19.5    | 1670     |
| 125 gr Speer GDHP       | Power Pro 300MP | Fed 100 | Federal | 1.580" | 22.3C   | 2000     |
| 125 gr Speer GDHP       | Unique          | CCI 500 | Speer   | 1.580" | 9.6     | 1343     |
| 125 gr Speer GDHP       | Power Pistol    | CCI 500 | Speer   | 1.580" | 10.5    | 1345     |
| 125 gr Speer GDHP       | 2400            | CCI 500 | Speer   | 1.580" | 17.5    | 1409     |
| 135 gr Speer GDHP       | Unique          | CCI 500 | Speer   | 1.590" | 7.8     | 1185     |
| 135 gr Speer GDHP       | Power Pistol    | CCI 500 | Speer   | 1.590" | 9.6     | 1291     |
| 135 gr Speer GDHP       | 2400            | CCI 500 | Speer   | 1.590" | 16.0    | 1377     |
| 140 gr Speer UCHP       | Unique          | CCI 500 | Speer   | 1.560" | 8.0     | 1185     |
| 140 gr Speer UCHP       | Power Pistol    | CCI 500 | Speer   | 1.560" | 9.5     | 1288     |
| 140 gr Speer UCHP       | Blue Dot        | CCI 500 | Speer   | 1.560" | 11.5    | 1324     |
| 140 gr Speer UCHP       | 2400            | CCI 500 | Speer   | 1.560" | 15.1    | 1298     |
| 158 gr Speer UCSP       | Power Pro 300MP | Fed 100 | Federal | 1.570" | 18.6    | 1690     |
| 158 gr Speer GDHP       | Unique          | CCI 500 | Speer   | 1.575" | 7.7     | 1040     |
| 158 gr Speer GDHP       | Power Pistol    | CCI 500 | Speer   | 1.575" | 8.5     | 1078     |
| 158 gr Speer GDHP       | Blue Dot        | CCI 500 | Speer   | 1.575" | 10.2    | 1188     |
| 158 gr Speer GDHP       | 2400            | CCI 500 | Speer   | 1.575" | 14.8    | 1265     |
| 170gr Speer GDSP        | Power Pro 300MP | Fed 100 | Federal | 1.59"  | 17.5    | 1620     |
| 170gr Speer GDSP        | Blue Dot        | CCI 500 | Speer   | 1.590" | 9.4     | 1002     |
| 170gr Speer GDSP        | 2400            | CCI 500 | Speer   | 1.590" | 14.5    | 1166     |
| 40 S&W                  |                 |         |         |        |         |          |
| 155 gr Speer GDHP       | Bullseye        | CCI 500 | Speer   | 1.120" | 6.0     | 1023     |
| 155 gr Speer GDHP       | American Select | CCI 500 | Speer   | 1.120" | 5.6     | 1001     |
| 155 gr Speer GDHP       | Unique          | CCI 500 | Speer   | 1.120" | 8.0     | 1207     |
| 155 gr Speer GDHP       | Power Pistol    | CCI 500 | Speer   | 1.120" | 9.0     | 1213     |
| 155 gr Speer GDHP       | Blue Dot        | CCI 500 | Speer   | 1.120" | 11.0    | 1221     |

Pistol/Revolver Load Data continued

| 40 S&W continued     |                 |         |            |        |         |          |
|----------------------|-----------------|---------|------------|--------|---------|----------|
| Cartridge/Bullet     | Powder          | Primer  | Case       | OAL    | Max Chg | Velocity |
|                      |                 |         |            |        | grains  | fps      |
| 165 gr Speer GDHP    | Bullseye        | CCI 500 | Speer      | 1.120" | 5.8     | 1022     |
| 165 gr Speer GDHP    | Unique          | CCI 500 | Speer      | 1.120" | 7.2     | 1064     |
| 165 gr Speer GDHP    | Power Pistol    | CCI 500 | Speer      | 1.120" | 7.8     | 1081     |
| 180 gr Speer GDHP    | Bullseye        | CCI 500 | Speer      | 1.120" | 5.5     | 929      |
| 180 gr Speer GDHP    | American Select | CCI 500 | Speer      | 1.120" | 5.1     | 865      |
| 180 gr Speer GDHP    | Unique          | CCI 500 | Speer      | 1.120" | 6.7     | 1000     |
| 180 gr Speer GDHP    | Power Pistol    | CCI 500 | Speer      | 1.120" | 7.2     | 1013     |
| 180 gr Speer GDHP    | Blue Dot        | CCI 500 | Speer      | 1.120" | 8.9     | 1018     |
| 10mm Auto            |                 |         |            |        |         |          |
| 155 gr Speer GDHP    | Unique          | CCI 300 | Hornady    | 1.250" | 8.5     | 1246     |
| 155 gr Speer GDHP    | Blue Dot        | CCI 300 | Hornady    | 1.250" | 12      | 1291     |
| 165 gr Speer GDHP    | Unique          | CCI 300 | Hornady    | 1.255" | 8.3     | 1194     |
| 165 gr Speer GDHP    | Power Pistol    | CCI 300 | Hornady    | 1.255" | 10.0    | 1314     |
| 165 gr Speer GDHP    | Blue Dot        | CCI 300 | Hornady    | 1.255" | 11.5    | 1273     |
| 180 gr Speer GDHP    | Unique          | CCI 300 | Hornady    | 1.250" | 8.0     | 1138     |
| 180 gr Speer GDHP    | Blue Dot        | CCI 300 | Hornady    | 1.250" | 11.0    | 1295     |
| 180 gr Speer GDHP    | 2400            | CCI 300 | Hornady    | 1.250" | 12.8    | 1214     |
| 41 Rem Magnum        |                 |         |            |        |         |          |
| 200 gr Speer JHP-SWC | Unique          | CCI 300 | Winchester | 1.590" | 9.0     | 1181     |
| 200 gr Speer JHP-SWC | 2400            | CCI 300 | Winchester | 1.590" | 16.8    | 1311     |
| 210 gr Speer GDHP    | Unique          | CCI 300 | Winchester | 1.575" | 9.7     | 1123     |
| 210 gr Speer GDHP    | 2400            | CCI 300 | Winchester | 1.575" | 19.0    | 1223     |
| 44 S&W Special       |                 |         |            |        |         |          |
| 225 gr cast SWC GC   | Bullseye        | CCI 300 | Remington  | 1.500" | 5.5     | 903      |
| 225 gr cast SWC GC   | Unique          | CCI 300 | Remington  | 1.500" | 7.8     | 1043     |
| 225 gr cast SWC GC   | Power Pistol    | CCI 300 | Remington  | 1.500" | 7.7     | 952      |
| 240 gr Speer LSWC    | Bullseye        | CCI 300 | Remington  | 1.475" | 5.2     | 793      |
| 240 gr Speer LSWC    | Unique          | CCI 300 | Remington  | 1.475" | 6.3     | 820      |
| 250 gr cast (Keith)  | Bullseye        | CCI 300 | Remington  | 1.580" | 5.3     | 835      |
| 250 gr cast (Keith)  | Unique          | CCI 300 | Remington  | 1.580" | 6.9     | 921      |
| 250 gr cast (Keith)  | Power Pistol    | CCI 300 | Remington  | 1.580" | 8.0     | 954      |
| 250 gr cast (Keith)  | 2400            | CCI 300 | Remington  | 1.580" | 13.0    | 965      |
| 200 gr Speer GSHP    | Bullseye        | CCI 300 | Remington  | 1.490" | 5.9     | 884      |
| 200 gr Speer GSHP    | Red Dot         | CCI 300 | Remington  | 1.490" | 5.9     | 868      |
| 200 gr Speer GSHP    | American Select | CCI 300 | Remington  | 1.490" | 5.7     | 821      |
| 200 gr Speer GSHP    | Unique          | CCI 300 | Remington  | 1.490" | 7.8     | 855      |

Pistol/Revolver Load Data continued

| 44 S&W Special continued |                 |         |           |        |         |          |
|--------------------------|-----------------|---------|-----------|--------|---------|----------|
| Cartridge/Bullet         | Powder          | Primer  | Case      | OAL    | Max Chg | Velocity |
|                          |                 |         |           |        | grains  | fps      |
| 200 gr Speer GSHP        | Power Pistol    | CCI 300 | Remington | 1.490" | 8.6     | 976      |
| 240 gr Speer JHP         | Unique          | CCI 300 | Remington | 1.465" | 7.6     | 836      |
| 240 gr Speer JHP         | Power Pistol    | CCI 300 | Remington | 1.465" | 7.6     | 819      |
| 240 gr Speer JHP         | Blue Dot        | CCI 300 | Remington | 1.465" | 10.2    | 871      |
| 44 Rem Magnum            |                 |         |           |        |         |          |
| 225 gr cast SWC GC       | Unique          | CCI 300 | Speer     | 1.635" | 11.0    | 1259     |
| 225 gr cast SWC GC       | 2400            | CCI 300 | Speer     | 1.635" | 21.0    | 1482     |
| 240 gr cast LSWC         | Bullseye        | CCI 300 | Speer     | 1.605" | 6.0     | 894      |
| 240 gr cast LSWC         | Red Dot         | CCI 300 | Speer     | 1.605" | 6.5     | 905      |
| 240 gr cast LSWC         | Green Dot       | CCI 300 | Speer     | 1.605" | 7.0     | 901      |
| 240 gr cast LSWC         | Unique          | CCI 300 | Speer     | 1.605" | 7.0     | 899      |
| 250 gr cast (Keith)      | Unique          | CCI 300 | Speer     | 1.710" | 11.0    | 1211     |
| 250 gr cast (Keith)      | 2400            | CCI 300 | Speer     | 1.710" | 20.0    | 1390     |
| 200 gr Speer Mag HP      | Power Pro 300MP | Fed 150 | Federal   | 1.590" | 29.0    | 1760     |
| 200 gr Speer Mag JHP     | Unique          | CCI 300 | Speer     | 1.590" | 12.4    | 1399     |
| 200 gr Speer Mag JHP     | Power Pistol    | CCI 300 | Speer     | 1.590" | 15.5    | 1573     |
| 200 gr Speer Mag JHP     | Blue Dot        | CCI 300 | Speer     | 1.590" | 16.0    | 1495     |
| 200 gr Speer Mag JHP     | 2400            | CCI 300 | Speer     | 1.590" | 24.0    | 1589     |
| 210 gr Speer GDHP        | Unique          | CCI 300 | Speer     | 1.600" | 12.5    | 1392     |
| 210 gr Speer GDHP        | Power Pistol    | CCI 300 | Speer     | 1.600" | 14.5    | 1504     |
| 210 gr Speer GDHP        | 2400            | CCI 300 | Speer     | 1.600" | 23.5    | 1566     |
| 225 gr Speer JHP-SWC     | 2400            | CCI 300 | Speer     | 1.575" | 21.4    | 1526     |
| 240 gr Speer GDSP        | Power Pro 300MP | Fed 150 | Federal   | 1.575" | 25.0    | 1570     |
| 240 gr Speer GDHP        | Unique          | CCI 300 | Speer     | 1.575" | 10.3    | 1175     |
| 240 gr Speer GDHP        | Blue Dot        | CCI 300 | Speer     | 1.575" | 13.7    | 1285     |
| 240 gr Speer GDHP        | 2400            | CCI 300 | Speer     | 1.575" | 21.0    | 1434     |
| 270 gr Speer GDSP        | Power Pro 300MP | Fed 150 | Federal   | 1.585" | 22.0    | 1400     |
| 270 gr Speer GDHP        | 2400            | CCI 300 | Speer     | 1.585" | 17.5    | 1182     |
| 300 gr Speer UCSP        | Power Pro 300MP | Fed 150 | Federal   | 10665" | 22.0    | 1350     |
| 300 gr Speer UCSP        | 2400            | CCI 300 | Speer     | 1.665" | 19.0    | 1088     |
| 45 G.A.P.                |                 |         |           |        |         |          |
| 185 gr Speer GDHP        | Bullseye        | CCI 500 | Speer     | 1.070" | 6.1     | 1037     |
| 185 gr Speer GDHP        | Unique          | CCI 500 | Speer     | 1.070" | 7.7     | 1009     |
| 185 gr Speer GDHP        | Power Pistol    | CCI 500 | Speer     | 1.070" | 7.8     | 993      |
| 200 gr Speer GDHP        | Bullseye        | CCI 500 | Speer     | 1.070" | 5.4     | 943      |
| 200 gr Speer GDHP        | Unique          | CCI 500 | Speer     | 1.070" | 6.8     | 988      |
| 200 gr Speer GDHP        | Power Pistol    | CCI 500 | Speer     | 1.070" | 7.6     | 977      |

Pistol/Revolver Load Data continued

| 45 G.A.P. continued |                 |         |            |        |         |          |
|---------------------|-----------------|---------|------------|--------|---------|----------|
| Cartridge/Bullet    | Powder          | Primer  | Case       | OAL    | Max Chg | Velocity |
|                     |                 |         |            |        | grains  | fps      |
| 200 gr Speer GDHP   | Unique          | CCI 500 | Speer      | 1.070" | 6.8     | 988      |
| 200 gr Speer GDHP   | Power Pistol    | CCI 500 | Speer      | 1.070" | 7.6     | 977      |
| 45 Auto             |                 |         |            |        |         |          |
| 200 gr SpeerLSWC    | Bullseye        | CCI 300 | Speer      | 1.190" | 4.6     | 807      |
| 200 gr SpeerLSWC    | Red Dot         | CCI 300 | Speer      | 1.190" | 4.5     | 831      |
| 200 gr Speer LSWC   | Unique          | CCI 300 | Speer      | 1.190" | 5.4     | 790      |
| 230 gr Speer LRN    | Red Dot         | CCI 300 | Speer      | 1.270" | 5.1     | 841      |
| 230 gr Speer LRN    | Green Dot       | CCI 300 | Speer      | 1.270" | 5.3     | 842      |
| 230 gr Speer LRN    | Unique          | CCI 300 | Speer      | 1.270" | 5.8     | 849      |
| 230 gr Speer LRN    | Herco           | CCI 300 | Speer      | 1.270" | 6.4     | 845      |
| 185 gr Speer GDHP   | Bullseye        | CCI 300 | Speer      | 1.200" | 6.4     | 986      |
| 185 gr Speer GDHP   | American Select | CCI 300 | Speer      | 1.200" | 6.2     | 941      |
| 185 gr Speer GDHP   | Unique          | CCI 300 | Speer      | 1.200" | 8.2     | 1015     |
| 185 gr Speer GDHP   | Power Pistol    | CCI 300 | Speer      | 1.200" | 9.5     | 1047     |
| 200 gr Speer GDHP   | Bullseye        | CCI 300 | Speer      | 1.200" | 5.8     | 934      |
| 200 gr Speer GDHP   | Unique          | CCI 300 | Speer      | 1.200" | 7.3     | 984      |
| 200 gr Speer GDHP   | Power Pistol    | CCI 300 | Speer      | 1.200" | 8.3     | 952      |
| 200 gr Speer GDHP   | Blue Dot        | CCI 300 | Speer      | 1.200" | 10.5    | 1010     |
| 230 gr Speer TMJ RN | Bullseye        | CCI 300 | Speer      | 1.260" | 5.7     | 840      |
| 230 gr Speer TMJ RN | Red Dot         | CCI 300 | Speer      | 1.260" | 5.3     | 839      |
| 230 gr Speer TMJ RN | Unique          | CCI 300 | Speer      | 1.260" | 6.5     | 832      |
| 230 gr Speer TMJ RN | Power Pistol    | CCI 300 | Speer      | 1.260" | 8.1     | 916      |
| 45 Colt             |                 |         |            |        |         |          |
| 200 gr Speer LSWC   | Bullseye        | CCI 300 | Winchester | 1.515" | 7.5     | 988      |
| 200 gr Speer LSWC   | Red Dot         | CCI 300 | Winchester | 1.515" | 7.3     | 1001     |
| 200 gr Speer LSWC   | Green Dot       | CCI 300 | Winchester | 1.515" | 8.3     | 980      |
| 200 gr Speer LSWC   | Unique          | CCI 300 | Winchester | 1.515" | 9.5     | 1061     |
| 200 gr Speer LSWC   | Herco           | CCI 300 | Winchester | 1.515" | 9.5     | 1021     |
| 250 gr Speer LSWC   | Bullseye        | CCI 300 | Winchester | 1.600" | 7.0     | 879      |
| 250 gr Speer LSWC   | Unique          | CCI 300 | Winchester | 1.600" | 9.5     | 941      |
| 250 gr Speer LSWC   | Blue Dot        | CCI 300 | Winchester | 1.600" | 12.9    | 1028     |
| 250 gr Speer LSWC   | 2400            | CCI 300 | Winchester | 1.600" | 15.4    | 972      |
| 200 gr Speer GDHP   | Bullseye        | CCI 300 | Winchester | 1.555" | 7.9     | 994      |
| 200 gr Speer GDHP   | Red Dot         | CCI 300 | Winchester | 1.555" | 7.6     | 981      |
| 200 gr Speer GDHP   | Green Dot       | CCI 300 | Winchester | 1.555" | 8.8     | 991      |
| 200 gr Speer GDHP   | Unique          | CCI 300 | Winchester | 1.555" | 9.8     | 1048     |
| 200 gr Speer GDHP   | Power Pistol    | CCI 300 | Winchester | 1.555" | 9.2     | 885      |

Pistol/Revolver Load Data continued

| 45 Colt continued    |                 |         |            |        |         |          |
|----------------------|-----------------|---------|------------|--------|---------|----------|
| Cartridge/Bullet     | Powder          | Primer  | Case       | OAL    | Max Chg | Velocity |
|                      |                 |         |            |        | grains  | fps      |
| 200 gr Speer GDHP    | Herco           | CCI 300 | Winchester | 1.555" | 10.0    | 1032     |
| 230 gr Speer GDHP    | Bullseye        | CCI 300 | Winchester | 1.600" | 7.1     | 890      |
| 230 gr Speer GDHP    | Unique          | CCI 300 | Winchester | 1.600" | 9.0     | 932      |
| 230 gr Speer GDHP    | Power Pistol    | CCI 300 | Winchester | 1.600" | 9.5     | 878      |
| 230 gr Speer GDHP    | Herco           | CCI 300 | Winchester | 1.600" | 9.4     | 918      |
| 230 gr Speer GDHP    | Blue Dot        | CCI 300 | Winchester | 1.600" | 13.0    | 1036     |
| 250 gr Speer GDHP    | Unique          | CCI 300 | Winchester | 1.600" | 7.8     | 840      |
| 250 gr Speer GDHP    | Power Pistol    | CCI 300 | Winchester | 1.600" | 8.8     | 845      |
| 250 gr Speer GDHP    | 2400            | CCI 300 | Winchester | 1.600" | 15.0    | 826      |
| 260 gr Speer JHP     | Bullseye        | CCI 300 | Winchester | 1.590" | 7.1     | 841      |
| 260 gr Speer JHP     | Power Pistol    | CCI 300 | Winchester | 1.590" | 8.4     | 852      |
| 260 gr Speer JHP     | Blue Dot        | CCI 300 | Winchester | 1.590" | 13.0    | 941      |
| 454 Casull           |                 |         |            |        |         |          |
| 270 gr hard cast SWC | Unique          | CCI 400 | Starline   | 1.750" | 11.0    | 1155     |
| 270 gr hard cast SWC | Power Pistol    | CCI 400 | Starline   | 1.750" | 11.0    | 1114     |
| 250 gr Speer GDHP    | 2400            | CCI 400 | Starline   | 1.670" | 26.0    | 1531     |
| 260 gr Speer HP      | Power Pro 300MP | Fed 205 | Federal    | 1.670" | 31.0    | 1665     |
| 300 gr Speer UCSP    | Power Pro 300MP | Fed 205 | Federal    | 1.760" | 29.5    | 1535     |
| 300 gr Speer UCSP    | 2400            | CCI 400 | Winchester | 1.760" | 24.0    | 1325     |
| 300 gr Speer GDHP    | Power Pro 300MP | Fed 205 | Federal    | 1.740" | 31.0C   | 1740     |
| 300 gr Speer GDHP    | 2400            | CCI 400 | Winchester | 1.750" | 27.0    | 1479     |
| 460 S&W Mag          |                 |         |            |        |         |          |
| 250 gr Speer GDHP    | Power Pistol    | Fed 210 | Hornady    | 2.090" | 21.0    | 1514     |
| 250 gr Speer GDHP    | 2400            | Fed 210 | Hornady    | 2.090" | 31.0    | 1553     |
| 260 gr Speer HP      | Power Pro 300MP | Fed 210 | Federal    | 2.090" | 36.0    | 1835     |
| 300 gr Speer UCSP    | Power Pro 300MP | Fed210  | Federal    | 2.170" | 28.0    | 1610     |
| 300 gr Speer UCSP    | Power Pistol    | Fed 210 | Hornady    | 2.170" | 20.0    | 1359     |
| 300 gr Speer UCSP    | 2400            | Fed 210 | Hornady    | 2.170" | 30.0    | 1551     |
| 300 gr Speer GDHP    | Power Pro 300MP | Fed 210 | Federal    | 2.150" | 38.0    | 1930     |
| 300 gr Speer GDHP    | Power Pistol    | Fed 210 | Hornady    | 2.150" | 24.0    | 1525     |
| 300 gr Speer GDHP    | 2400            | Fed 210 | Hornady    | 2.150" | 36.0    | 1782     |
| 480 Ruger            |                 |         |            |        |         |          |
| 275 gr Speer GDHP    | Power Pro 300MP | Fed 150 | Ruger      | 1.640" | 38.0C   | 1910     |
| 275 gr Speer GDHP    | Unique          | CCI 300 | Hornady    | 1.640" | 16.0    | 1400     |
| 275 gr Speer GDHP    | Power Pistol    | CCI 300 | Hornady    | 1.640" | 17.5    | 1465     |
| 275 gr Speer GDHP    | 2400            | CCI 300 | Hornady    | 1.640" | 29.0    | 1560     |
| 325 gr Speer GDSP    | Power Pro 300MP | Fed 150 | Ruger      | 1.650" | 29.5C   | 1620     |

Pistol/Revolver Load Data continued

| 480 Ruger continued |                 |         |          |        |         |          |
|---------------------|-----------------|---------|----------|--------|---------|----------|
| Cartridge/Bullet    | Powder          | Primer  | Case     | OAL    | Max Chg | Velocity |
|                     |                 |         |          |        | grains  | fps      |
| 325 gr Speer GDSP   | Unique          | CCI 300 | Hornady  | 1.650" | 13.0    | 1178     |
| 325 gr Speer GDSP   | 2400            | CCI 300 | Hornady  | 1.650" | 25.0    | 1435     |
| 400 gr Speer GDSP   | Power Pro 300MP | Fed 150 | Ruger    | 1.650" | 24.2C   | 1370     |
| 400 gr Speer GDSP   | 2400            | CCI 300 | Hornady  | 1.650" | 18.0    | 1081     |
| 500 S&W Mag         |                 |         |          |        |         |          |
| 350 gr Speer UCSP   | Power Pro 300MP | Fed 215 | Starline | 2.250" | 49.0    | 2000     |
| 350 gr Speer UCSP   | Power Pistol    | Fed 215 | Starline | 2.250" | 27.0    | 1564     |
| 350 gr Speer UCSP   | 2400            | Fed 215 | Starline | 2.250" | 42.0    | 1642     |

| CENTERFIRE RIFLE LOAD DATA |                 |           |            |         |         |          |
|----------------------------|-----------------|-----------|------------|---------|---------|----------|
| .17 Remington              |                 |           |            |         |         |          |
| Caliber & Bullet           | Powder          | Primer    | Case       | Min OAL | Chg Wgt | Velocity |
|                            |                 |           |            |         | Grains  | fps      |
| Horn. 25 gr HP             | Reloder 15      | Rem 7 1/2 | Remington  | 2.14    | 22.8    | 3915     |
| .218 Bee                   |                 |           |            |         |         |          |
| Speer 45 gr FNSP           | 2400            | CCI 400   | Winchester | 1.655   | 8.3     | 2151     |
| .221 Fireball              |                 |           |            |         |         |          |
| Speer 40 gr SP             | 2400            | Rem 7 1/2 | Remington  | 1.8     | 15.5    | 2700     |
| Sierra 50 gr Spitzer       | 2400            | Rem 7 1/2 | Remington  | 1.8     | 13.8    | 2410     |
| Sierra 60 gr Spitzer       | 2400            | Rem 7 1/2 | Remington  | 1.825   | 13.3    | 2200     |
| Sierra 60 gr Spitzer       | Reloder 7       | Rem 7 1/2 | Remington  | 1.825   | 18.1    | 2250     |
| .22 Hornet                 |                 |           |            |         |         |          |
| Speer 33 gr TNT HP         | 2400            | CCI 500   | Winchester | 1.68    | 11.5C   | 2985     |
| Hornady 40 gr V Max        | Power Pro 300MP | Fed 205   | Winchester | 1.81    | 11.7C   | 2950     |
| Speer 40 gr SP             | 2400            | CCI 500   | Winchester | 1.723   | 9.1     | 2557     |
| Speer 40 gr SP             | Reloder 7       | CCI 500   | Winchester | 1.723   | 11.0    | 2265     |
| Speer 45 gr SP             | Power Pro 300MP | Fed 205   | Winchester | 1.723   | 11.5    | 2770     |
| Speer 45 gr SP             | 2400            | CCI 500   | Winchester | 1.723   | 9.0     | 2506     |
| Speer 45 gr SP             | Reloder 7       | CCI 500   | Winchester | 1.723   | 10.6    | 2170     |
| .222 Remington             |                 |           |            |         |         |          |
| Speer 40 gr SP             | Reloder 7       | CCI 400   | Remington  | 2.04    | 22.0    | 3617     |
| Speer 40 gr SP             | Reloder 10X     | CCI 400   | Remington  | 2.04    | 23.0    | 3346     |
| Speer 45 gr SP             | Reloder 7       | CCI 400   | Remington  | 2.13    | 21.5    | 3424     |
| Speer 45 gr SP             | Reloder 10X     | CCI 400   | Remington  | 2.13    | 22.0    | 3163     |
| Nosler 50 gr BT            | Reloder 10X     | Rem 6 1/2 | Remington  | 2.11    | 21.0    | 3023     |



Centerfire Rifle Load Data continued

| .222 Remington continued |                  |          |            |         |         |          |
|--------------------------|------------------|----------|------------|---------|---------|----------|
| Caliber & Bullet         | Powder           | Primer   | Case       | Min OAL | Chg Wgt | Velocity |
|                          |                  |          |            |         | Grains  | fps      |
| Speer 52 gr HP           | Reloder 7        | CCI 400  | Remington  | 2.11    | 20.0    | 3115     |
| Speer 55 gr SP           | Reloder 7        | CCI 400  | Remington  | 2.13    | 20.0    | 3045     |
| .223 Remington           |                  |          |            |         |         |          |
| Speer 40 gr SP           | Reloder 7        | CCI 400  | IMI        | 2.06    | 20.5    | 3011     |
| Speer 40 gr SP           | Reloder 10X      | CCI 400  | IMI        | 2.06    | 24.5    | 3481     |
| Speer 45 gr SP           | Reloder 7        | CCI 400  | IMI        | 2.155   | 20.0    | 3059     |
| Speer 45 gr SP           | Reloder 10X      | CCI 400  | IMI        | 2.155   | 24.0    | 3292     |
| Nosler 50 gr BT          | Reloder 10X      | WSR      | Winchester | 2.2     | 24.2    | 3389     |
| Nosler 50 gr BT          | Reloder 15       | WSR      | Winchester | 2.2     | 28.0    | 3356     |
| Speer 52 gr HP           | Reloder 7        | CCI 400  | IMI        | 2.2     | 20.5    | 2931     |
| Speer 52 gr HP           | Reloder 10X      | CCI 400  | IMI        | 2.2     | 22.5    | 3179     |
| Speer 55 gr SP           | Reloder 10X      | CCI 400  | IMI        | 2.175   | 23.0    | 3159     |
| Speer 62 gr FMJ          | Reloder 15       | CCI 400  | IMI        | 2.255   | 25.0C   | 2832     |
| Sierra 69 gr HPBT        | Reloder 15       | Fed 205M | Winchester | 2.26    | 25.5    | 2956     |
| Sierra 77 gr HPBT        | Reloder 15       | Fed 205M | Winchester | 2.26    | 24.1    | 2783     |
| 22-250 Remington         |                  |          |            |         |         |          |
| Speer 40 gr SP           | Reloder 10X      | CCI 200  | Remington  | 2.235   | 35.5    | 4164     |
| Speer 40 gr SP           | Reloder 15       | CCI 200  | Remington  | 2.235   | 40.0    | 4027     |
| Speer 45 gr SP           | Reloder 10X      | CCI 200  | Remington  | 2.235   | 34.5    | 3974     |
| Speer 45 gr SP           | Reloder 15       | CCI 200  | Remington  | 2.235   | 39.0    | 3897     |
| Hornady 50 gr V Max      | Reloder 15       | Win LRP  | Remington  | 2.35    | 38.1    | 3916     |
| Speer 52 gr HP           | Reloder 10X      | CCI 200  | Remington  | 2.35    | 33.0    | 3744     |
| Speer 52 gr HP           | Reloder 15       | CCI 200  | Remington  | 2.35    | 37.5    | 3662     |
| Hornady 55 gr V Max      | Power Pro 2000MR | Fed 210  | Federal    | 2.35    | 38.5    | 3730     |
| Hornady 55 gr V Max      | Reloder 15       | Win LRP  | Remington  | 2.35    | 37.5    | 3775     |
| Hornady 55 gr V Max      | Reloder 19       | Win LRP  | Remington  | 2.35    | 43.0    | 3540     |
| Speer 55 gr TBBC SP      | Reloder 15       | CCI 200  | Remington  | 2.235   | 37.0    | 3621     |
| Speer 70 gr Semi-SP      | Power Pro 2000MR | Fed 210  | Federal    | 2.235   | 35.3    | 3290     |
| Speer 70 gr SP           | Reloder 7        | CCI 200  | Remington  | 2.33    | 25.0    | 2753     |
| Speer 80 gr HPBT         | Power Pro 2000MR | Fed 210  | Federal    | 2.60    | 33.7    | 3070     |
| 220 Swift                |                  |          |            |         |         |          |
| Speer 40 gr SP           | Reloder 15       | CCI 200  | Winchester | 2.625   | 41.0    | 3996     |
| Speer 40 gr SP           | Reloder 19       | CCI 200  | Winchester | 2.625   | 46.0C   | 3746     |
| Speer 45 gr SP           | Reloder 15       | CCI 200  | Winchester | 2.65    | 41.5    | 4010     |
| Speer 45 gr SP           | Reloder 19       | CCI 200  | Winchester | 2.65    | 46.0C   | 3732     |
| Speer 52 gr HP           | Reloder 15       | CCI 200  | Winchester | 2.68    | 39.5    | 3742     |
| Speer 52 gr HP           | Reloder 19       | CCI 200  | Winchester | 2.68    | 46.0C   | 3645     |

Centerfire Rifle Load Data continued

| 220 Swift continued |                  |         |            |         |         |          |
|---------------------|------------------|---------|------------|---------|---------|----------|
| Caliber & Bullet    | Powder           | Primer  | Case       | Min OAL | Chg Wgt | Velocity |
|                     |                  |         |            |         | Grains  | fps      |
| Hornady 55 gr V Max | Power Pro 2000MR | Fed 210 | Federal    | 2.68    | 41.0    | 3920     |
| Speer 55 gr SP      | Reloder 15       | CCI 200 | Winchester | 2.65    | 39.0    | 3656     |
| Speer 55 gr SP      | Reloder 19       | CCI 200 | Winchester | 2.65    | 46.0C   | 3710     |
| Speer 69 gr HPBT    | Power Pro 2000MR | Fed 210 | Federal    | 2.68    | 37.5    | 3390     |
| Speer 70 gr SP      | Reloder 15       | CCI 200 | Winchester | 2.57    | 36.0    | 3231     |
| Speer 70 gr SP      | Reloder 19       | CCI 200 | Winchester | 2.57    | 42.0C   | 3219     |
| Speer 80 gr HPBT    | Power Pro 2000MR | Fed 210 | Federal    | 2.875   | 35.6    | 3120     |
| .223 WSSM           |                  |         |            |         |         |          |
| Speer 50 gr SP      | Power Pro 2000MR | Fed 215 | Winchester | 2.1     | 46.3    | 4040     |
| Speer 50 gr SP      | Reloder 10X      | Fed 210 | Winchester | 2.1     | 38.5    | 3929     |
| Speer 50 gr SP      | Reloder 15       | Fed 210 | Winchester | 2.1     | 44.5    | 4036     |
| Speer 55 gr HP-TNT  | Power Pro 2000MR | Fed 210 | Winchester | 2.21    | 45.0    | 3860     |
| Speer 55 gr SP      | Reloder 15       | Fed 210 | Winchester | 2.21    | 42.5    | 3867     |
| Speer 55gr SP       | Reloder 17       | Fed 210 | Winchester | 2.21    | 46.6    | 3865     |
| Speer 55 gr SP      | Reloder 19       | Fed 210 | Winchester | 2.21    | 49.5C   | 3746     |
| Speer 70 gr Semi-SP | Power Pro 2000MR | Fed 215 | Winchester | 2.08    | 41.0    | 3450     |
| Speer 70 gr SP      | Reloder 19       | Fed 210 | Winchester | 2.08    | 45.5    | 3478     |
| Speer 70 gr SP      | Reloder 22       | Fed 210 | Winchester | 2.08    | 47.5    | 3523     |
| 6 mm PPC            |                  |         |            |         |         |          |
| Speer 75 gr HP      | Reloder 7        | CCI BR4 | Sako       | 2.115   | 25.0    | 3011     |
| Speer 80 gr SP      | Reloder 7        | CCI BR4 | Sako       | 2.115   | 24.5    | 2897     |
| Speer 85 gr BTSP    | Reloder 7        | CCI BR4 | Sako       | 2.115   | 24.0    | 2863     |
| 243 Winchester      |                  |         |            |         |         |          |
| Hornady 65 gr V Max | Power Pro 2000MR | Fed 210 | Federal    | 2.6     | 44.5    | 3710     |
| Speer 70 gr HP      | Reloder 10X      | Fed 210 | Winchester | 2.625   | 36.5    | 3421     |
| Speer 70 gr HP      | Reloder 15       | Fed 210 | Winchester | 2.625   | 43.5    | 3506     |
| Hornady 75 gr V Max | Power Pro 2000MR | Fed 210 | Federal    | 2.64    | 41.0    | 3440     |
| Hornady 75 gr V Max | Power Pro 4000MR | Fed 210 | Federal    | 2.64    | 45.3C   | 3400     |
| Speer 75 gr HP      | Reloder 10X      | Fed 210 | Winchester | 2.59    | 36.0    | 3240     |
| Speer 75 gr HP      | Reloder 15       | Fed 210 | Winchester | 2.59    | 43.0    | 3400     |
| Speer 80 gr SP      | Reloder 10X      | Fed 210 | Winchester | 2.615   | 35.0    | 3162     |
| Speer 80 gr SP      | Reloder 15       | Fed 210 | Winchester | 2.615   | 41.5    | 3310     |
| Speer 80 gr SP      | Reloder 17       | Fed 210 | Federal    | 2.615   | 44.0    | 3362     |
| Speer 80 gr SP      | Reloder 19       | Fed 210 | Winchester | 2.615   | 48.0C   | 3206     |
| Speer 85 gr BTSP    | Power Pro 2000MR | Fed 210 | Federal    | 2.625   | 40.0    | 3240     |
| Speer 85 gr BTSP    | Power Pro 4000MR | Fed 210 | Federal    | 2.625   | 45.5C   | 3310     |
| Speer 85 gr HP      | Reloder 17       | Fed 210 | Federal    | 2.625   | 43.7    | 3316     |

Centerfire Rifle Load Data continued

| 243 Winchester continued |                  |         |            |         |         |          |
|--------------------------|------------------|---------|------------|---------|---------|----------|
| Caliber & Bullet         | Powder           | Primer  | Case       | Min OAL | Chg Wgt | Velocity |
|                          |                  |         |            |         | Grains  | fps      |
| Speer 85 gr BTSP         | Reloder 10X      | Fed 210 | Winchester | 2.625   | 35.0    | 3122     |
| Speer 85 gr BTSP         | Reloder 15       | Fed 210 | Winchester | 2.625   | 41.0    | 3218     |
| Speer 85 gr BTSP         | Reloder 19       | Fed 210 | Winchester | 2.625   | 48.0C   | 3182     |
| Speer 90 gr SP           | Reloder 15       | Fed 210 | Winchester | 2.625   | 38.0    | 3020     |
| Speer 90 gr SP           | Reloder 19       | Fed 210 | Winchester | 2.625   | 47.0C   | 3079     |
| Speer 90 gr SP           | Reloder 22       | Fed 210 | Winchester | 2.625   | 48.0C   | 3063     |
| Federal 95 gr Fusion     | Power Pro 2000MR | Fed 210 | Federal    | 2.65    | 35.0    | 2900     |
| Speer 100 gr BTSP        | Reloder 15       | Fed 210 | Winchester | 2.625   | 34.0    | 2691     |
| Speer 100 gr BTSP        | Reloder 17       | Fed 210 | Federal    | 2.625   | 40.8    | 3044     |
| Speer 100 gr BTSP        | Reloder 19       | Fed 210 | Winchester | 2.625   | 43.5    | 2903     |
| Speer 100 gr BTSP        | Reloder 22       | Fed 210 | Winchester | 2.625   | 45.5    | 2966     |
| Hornady 105 gr V Max     | Power Pro 4000MR | Fed 210 | Federal    | 2.63    | 42.1C   | 2985     |
| 6 mm Remington           |                  |         |            |         |         |          |
| Hornady 65 gr V Max      | Power Pro 2000MR | Fed 210 | Federal    | 2.825   | 44.7    | 3690     |
| Speer 70 gr HP           | Reloder 19       | CCI 200 | Remington  | 2.775   | 53.0C   | 3507     |
| Speer 70 gr HP           | Reloder 17       | Fed 210 | Federal    | 2.775   | 48.5C   | 3682     |
| Speer 70 gr HP           | Reloder 22       | CCI 200 | Remington  | 2.775   | 54.0C   | 3497     |
| Hornady 75 gr V Max      | Power Pro 2000MR | Fed 210 | Federal    | 2.825   | 42.7    | 3480     |
| Hornady 75 gr V Max      | Power Pro 4000MR | Fed 210 | Federal    | 2.825   | 47.0C   | 3365     |
| Speer 75 gr HP           | Reloder 19       | CCI 200 | Remington  | 2.775   | 52.0C   | 3440     |
| Speer 75 gr HP           | Reloder 22       | CCI 200 | Remington  | 2.775   | 53.0C   | 3474     |
| Speer 80 gr SP           | Reloder 17       | Fed 210 | Federal    | 2.775   | 46.7    | 3500     |
| Speer 80 gr SP           | Reloder 19       | CCI 200 | Remington  | 2.75    | 51.0C   | 3368     |
| Speer 80 gr SP           | Reloder 22       | CCI 200 | Remington  | 2.75    | 53.0C   | 3344     |
| Speer 85 gr BTSP         | Power Pro 2000MR | Fed 210 | Federal    | 2.775   | 41.8    | 3280     |
| Speer 85 gr BTSP         | Power Pro 4000MR | Fed 210 | Federal    | 2.775   | 47.0C   | 3300     |
| Speer 85 gr HP           | Reloder 17       | Fed 210 | Federal    | 2.775   | 46.0    | 3441     |
| Speer 85 gr BTSP         | Reloder 19       | CCI 200 | Remington  | 2.775   | 50.5C   | 3269     |
| Speer 85 gr BTSP         | Reloder 22       | CCI 200 | Remington  | 2.775   | 52.0C   | 3285     |
| Speer 90 gr SP           | Reloder 19       | CCI 200 | Remington  | 2.775   | 47.0    | 3063     |
| Speer 90 gr SP           | Reloder 22       | CCI 200 | Remington  | 2.775   | 51.0C   | 3258     |
| Federal 95 gr Fusion     | Power Pro 2000MR | Fed 210 | Federal    | 2.84    | 36.5    | 2950     |
| Speer 100 gr BTSP        | Power Pro 2000MR | Fed 210 | Federal    | 2.775   | 40.0    | 3000     |
| Speer 100 gr BTSP        | Reloder 17       | Fed 210 | Federal    | 2.800   | 44.0    | 3163     |
| Speer 100 gr BTSP        | Reloder 19       | CCI 200 | Remington  | 2.78    | 45.0    | 2835     |
| Speer 100 gr BTSP        | Reloder 22       | CCI 200 | Remington  | 2.78    | 47.0    | 2971     |
| Hornady 105 gr A Max     | Power Pro 4000MR | Fed 210 | Federal    | 2.81    | 44.0C   | 3025     |

Centerfire Rifle Load Data continued

| 243 WSSM             |                  |         |            |         |         |          |
|----------------------|------------------|---------|------------|---------|---------|----------|
| Caliber & Bullet     | Powder           | Primer  | Case       | Min OAL | Chg Wgt | Velocity |
|                      |                  |         |            |         | Grains  | fps      |
| Speer 70 gr HP       | Reloder 15       | Fed 210 | Winchester | 2.25    | 41.0    | 3478     |
| Speer 70 gr HP       | Reloder 17       | Fed 210 | Winchester | 2.185   | 49.0C   | 3745     |
| Speer 70 gr HP       | Reloder 19       | Fed 210 | Winchester | 2.25    | 49.5C   | 3464     |
| Speer 75 gr HP       | Reloder 15       | Fed 210 | Winchester | 2.165   | 41.0    | 3478     |
| Speer 75 gr HP       | Reloder 19       | Fed 210 | Winchester | 2.165   | 49.5C   | 3464     |
| Speer 80 gr SP       | Reloder 15       | Fed 210 | Winchester | 2.255   | 40.5    | 3386     |
| Speer 80 gr SP       | Reloder 17       | Fed 210 | Winchester | 2.255   | 44.5    | 3512     |
| Speer 80 gr SP       | Reloder 19       | Fed 210 | Winchester | 2.255   | 48.5C   | 3432     |
| Speer 85 gr HP       | Reloder 17       | Fed 210 | Winchester | 2.255   | 45.5    | 3452     |
| Speer 85 gr BTSP     | Reloder 15       | Fed 210 | Winchester | 2.255   | 39.0    | 3260     |
| Speer 85 gr BTSP     | Reloder 19       | Fed 210 | Winchester | 2.255   | 47.0C   | 3272     |
| Speer 90 gr SP       | Reloder 19       | Fed 210 | Winchester | 2.36    | 45.0    | 3218     |
| Speer 90 gr SP       | Reloder 22       | Fed 210 | Winchester | 2.36    | 46.5    | 3250     |
| Speer 100 gr BTSP    | Reloder 17       | Fed 210 | Winchester | 2.290   | 41.0    | 3128     |
| Speer 100 gr BTSP    | Reloder 19       | Fed 210 | Winchester | 2.36    | 40.5    | 2915     |
| Speer 100 gr BTSP    | Reloder 22       | Fed 210 | Winchester | 2.36    | 43.5    | 3004     |
| 257 Roberts          |                  |         |            |         |         |          |
| Hornady 75 gr V Max  | Power Pro 2000MR | Fed 210 | Federal    | 2.78    | 45.5    | 3550     |
| Sierra 75 gr HP      | Reloder 15       | Win LRP | Winchester | 2.775   | 41.8    | 3340     |
| Hornady 87 gr SP     | Power Pro 2000MR | Fed 210 | Federal    | 2.78    | 43.7    | 3290     |
| Speer 87 gr Spitzer  | Reloder 15       | Win LRP | Winchester | 2.775   | 41.0    | 3185     |
| Speer 100 gr Spitzer | Reloder 19       | Win LRP | Winchester | 2.775   | 44.7    | 2930     |
| Speer 100 gr BTSP    | Power Pro 2000MR | Fed 210 | Federal    | 2.78    | 41.5    | 3055     |
| Sierra 120 gr BTHP   | Reloder 22       | Win LRP | Winchester | 2.775   | 44.0    | 2785     |
| 25-06 Remington      |                  |         |            |         |         |          |
| Hornady 75 gr V Max  | Power Pro 2000MR | Fed 210 | Federal    | 3.1     | 50.5    | 3630     |
| Hornady 87 gr SP     | Power Pro 2000MR | Fed 210 | Federal    | 3.12    | 48.5    | 3400     |
| Speer 87 gr SP       | Reloder 15       | CCI 200 | Remington  | 3.115   | 47.0    | 3268     |
| Speer 87 gr SP       | Reloder 17       | Fed 210 | Federal    | 3.115   | 54.5    | 3547     |
| Speer 87 gr SP       | Reloder 19       | CCI 200 | Remington  | 3.115   | 60.0C   | 3452     |
| Speer 100 gr BTSP    | Power Pro 2000MR | Fed 210 | Federal    | 3.095   | 47.5    | 3215     |
| Speer 100 gr SP      | Reloder 19       | CCI 200 | Remington  | 3.095   | 57.0    | 3226     |
| Speer 100 gr SP      | Reloder 22       | CCI 200 | Remington  | 3.095   | 58.0    | 3248     |
| Speer 100 gr SP      | Reloder 25       | CCI 200 | Remington  | 3.095   | 60.0C   | 3224     |
| Speer 100 gr BTSP    | Reloder 17       | Fed 210 | Federal    | 3.095   | 53.0    | 3390     |
| Speer 115 gr SP      | Reloder 22       | CCI 200 | Remington  | 3.2     | 52.0    | 3054     |
| Speer 115 gr SP      | Reloder 25       | CCI 200 | Remington  | 3.2     | 56.0    | 3155     |

Centerfire Rifle Load Data continued

| 25-06 Remington continued          |                  |         |            |         |         |          |
|------------------------------------|------------------|---------|------------|---------|---------|----------|
| Caliber & Bullet                   | Powder           | Primer  | Case       | Min OAL | Chg Wgt | Velocity |
|                                    |                  |         |            |         | Grains  | fps      |
| Speer 120 gr BTSP                  | Power Pro 4000MR | Fed 210 | Federal    | 3.2     | 50.4    | 3020     |
| Speer 120 gr BTSP                  | Reloder 17       | Fed 210 | Federal    | 3.2     | 48.5    | 3046     |
| Sierra 120 gr BTSP                 | Reloder 22       | CCI 200 | Remington  | 3.2     | 52.0    | 2931     |
| Sierra 120 gr BTSP                 | Reloder 25       | CCI 200 | Remington  | 3.2     | 58.0C   | 3071     |
| 25 WSSM                            |                  |         |            |         |         |          |
| Hornady 87 gr SP                   | Power Pro 2000MR | Fed 210 | Winchester | 2.315   | 46.0    | 3340     |
| Speer 87 gr SP                     | Reloder 10X      | CCI 200 | Winchester | 2.27    | 39.0    | 3313     |
| Speer 87 gr SP                     | Reloder 15       | CCI 200 | Winchester | 2.27    | 45.5    | 3428     |
| Speer 87 gr SP                     | Reloder 17       | Fed 210 | Winchester | 2.27    | 52.0C   | 3499     |
| Speer 87 gr SP                     | Reloder 19       | CCI 200 | Winchester | 2.27    | 52.0C   | 3333     |
| Speer 100 gr BTSP                  | Power Pro 2000MR | Fed 210 | Winchester | 2.27    | 44.0    | 3140     |
| Speer 100 gr SP                    | Reloder 10X      | CCI 200 | Winchester | 2.27    | 35.0    | 2984     |
| Speer 100 gr SP                    | Reloder 15       | CCI 200 | Winchester | 2.27    | 41.5    | 3110     |
| Speer 100 gr SP                    | Reloder 19       | CCI 200 | Winchester | 2.27    | 49.5C   | 3180     |
| Speer 100 gr BTSP                  | Reloder 17       | Fed 210 | Winchester | 2.27    | 47.5    | 3311     |
| Speer 120 gr BTSP                  | Power Pro 2000MR | Fed 210 | Winchester | 2.33    | 40.0    | 2800     |
| Sierra 120 gr BTSP                 | Reloder 10X      | CCI 200 | Winchester | 2.27    | 31.5    | 2607     |
| Sierra 120 gr BTSP                 | Reloder 15       | CCI 200 | Winchester | 2.27    | 38.0    | 2792     |
| Sierra 120 gr BTSP                 | Reloder 17       | Fed 210 | Winchester | 2.27    | 45.0    | 3041     |
| Sierra 120 gr BTSP                 | Reloder 19       | CCI 200 | Winchester | 2.27    | 46.0C   | 2914     |
| 257 Weatherby Magnum               |                  |         |            |         |         |          |
| Speer 87 gr SP                     | Reloder 19       | CCI 250 | Federal    | 3.15    | 68.0    | 3637     |
| Speer 87 gr SP                     | Reloder 22       | CCI 250 | Federal    | 3.15    | 71.0    | 3661     |
| Speer 87 gr SP                     | Reloder 25       | CCI 250 | Federal    | 3.15    | 73.0C   | 3670     |
| Speer 100 gr SP                    | Reloder 19       | CCI 250 | Federal    | 3.15    | 65.0    | 3405     |
| Speer 100 gr SP                    | Reloder 22       | CCI 250 | Federal    | 3.15    | 68.0    | 3450     |
| Speer 100 gr SP                    | Reloder 25       | CCI 250 | Federal    | 3.15    | 73.0    | 3545     |
| Sierra 120 gr BTSP                 | Reloder 22       | CCI 250 | Federal    | 3.17    | 63.0    | 3120     |
| Sierra 120 gr BTSP                 | Reloder 25       | CCI 250 | Federal    | 3.17    | 67.0    | 3236     |
| 6.5 X 55 Swedish Mauser (military) |                  |         |            |         |         |          |
| Speer 120 gr SP                    | Reloder 19       | CCI 200 | Remington  | 3       | 41.0    | 2655     |
| Speer 120 gr SP                    | Reloder 22       | CCI 200 | Remington  | 3       | 42.0    | 2670     |
| Speer 90 gr HP                     | Reloder 17       | Fed 210 | Federal    | 2.850   | 48.5    | 3223     |

Centerfire Rifle Load Data continued

| 6.5 X 55 Swedish Mauser (commercial action) |                  |         |            |         |         |          |
|---|------------------|---------|------------|---------|---------|----------|
| Caliber & Bullet                            | Powder           | Primer  | Case       | Min OAL | Chg Wgt | Velocity |
|   |                  |         |            |         | Grains  | fps      |
| Speer 120 gr SP                             | Power Pro 2000MR | Fed 210 | Federal    | 3       | 36.0    | 2560     |
| Speer 120 gr SP                             | Reloder 17       | Fed 210 | Federal    | 3       | 41.5    | 2741     |
| Speer 120 gr SP                             | Reloder 19       | CCI 200 | Remington  | 3       | 46.0    | 2820     |
| Speer 120 gr SP                             | Reloder 22       | CCI 200 | Remington  | 3       | 46.0    | 2830     |
| Speer 140 gr SP                             | Power Pro 2000MR | Fed 210 | Federal    | 3       | 33.0    | 2310     |
| Speer 140 gr SP                             | Reloder 17       | Fed 210 | Federal    | 3       | 38.5    | 2508     |
| Speer 140 gr SP                             | Reloder 19       | CCI 200 | Remington  | 3       | 45.0    | 2616     |
| Speer 140 gr SP                             | Reloder 22       | CCI 200 | Remington  | 3       | 45.0    | 2655     |
| 260 Remington                               |                  |         |            |         |         |          |
| Speer 90 gr HP                              | Power Pro 2000MR | Fed 210 | Federal    | 2.65    | 48.2    | 3440     |
| Speer 90 gr HP                              | Reloder 15       | CCI 200 | Remington  | 2.65    | 45.5    | 3311     |
| Speer 90 gr HP                              | Reloder 19       | CCI 200 | Remington  | 2.65    | 50.0C   | 2985     |
| Speer 120 gr SP                             | Power Pro 2000MR | Fed 210 | Federal    | 2.72    | 40.0    | 2830     |
| Speer 120 gr SP                             | Reloder 15       | CCI 200 | Remington  | 2.72    | 39.0    | 2819     |
| Speer 120 gr SP                             | Reloder 17       | Fed 210 | Federal    | 2.72    | 44.0    | 2912     |
| Speer 120 gr SP                             | Reloder 19       | CCI 200 | Remington  | 2.72    | 48.0C   | 2950     |
| Speer 140 gr SP                             | Reloder 17       | Fed 210 | Federal    | 2.745   | 41.0    | 2645     |
| Speer 140 gr SP                             | Reloder 19       | CCI 200 | Remington  | 2.745   | 45.5C   | 2731     |
| Speer 140 gr SP                             | Reloder 22       | CCI 200 | Remington  | 2.745   | 46.0C   | 2701     |
| 6.8 mm Remington SPC                        |                  |         |            |         |         |          |
| Speer 90 gr HP                              | Reloder 7        | CCI 200 | Remington  | 2.25    | 27.5    | 2983     |
| Speer 90 gr HP                              | Reloder 10X      | CCI 200 | Remington  | 2.25    | 29.5    | 2991     |
| Speer 100 gr HP                             | Reloder 7        | CCI 200 | Remington  | 2.25    | 26.0    | 2715     |
| Speer 100 gr HP                             | Reloder 10X      | CCI 200 | Remington  | 2.25    | 28.5C   | 2791     |
| Speer 130 gr SP                             | Reloder 10X      | CCI 200 | Remington  | 2.25    | 25.5C   | 2431     |
| 270 Winchester                              |                  |         |            |         |         |          |
| Speer 90 gr HP                              | Reloder 15       | CCI 200 | Winchester | 3.17    | 55.0    | 3511     |
| Speer 90 gr HP                              | Reloder 19       | CCI 200 | Winchester | 3.17    | 64.0C   | 3341     |
| Speer 100 gr HP                             | Power Pro 2000MR | Fed 210 | Federal    | 3.1     | 53.0    | 3420     |
| Speer 100 gr HP                             | Reloder 17       | Fed 210 | Federal    | 3.1     | 59.0    | 3554     |
| Speer 100 gr HP                             | Reloder 19       | CCI 200 | Winchester | 3.1     | 62.0C   | 3220     |
| Speer 130 gr SP                             | Reloder 15       | CCI 200 | Winchester | 3.24    | 45.0    | 2742     |
| Speer 130 gr SP                             | Reloder 19       | CCI 200 | Winchester | 3.24    | 57.0    | 2904     |
| Speer 130 gr SP                             | Reloder 22       | CCI 200 | Winchester | 3.24    | 58.0    | 2947     |
| Speer 130 gr BTSP                           | Power Pro 2000MR | Fed 210 | Federal    | 3.24    | 46.5    | 2950     |
| Speer 130 gr BTSP                           | Reloder 17       | Fed 210 | Federal    | 3.2     | 54.0    | 3136     |

Centerfire Rifle Load Data continued

| 270 Winchester continued |                  |         |            |         |         |          |
|--------------------------|------------------|---------|------------|---------|---------|----------|
| Caliber & Bullet         | Powder           | Primer  | Case       | Min OAL | Chg Wgt | Velocity |
|                          |                  |         |            |         | Grains  | fps      |
| Federal 130 gr Fusion    | Power Pro 2000MR | Fed 210 | Federal    | 3.245   | 48.5    | 3020     |
| Speer 140 gr SP          | Reloder 19       | CCI 200 | Winchester | 3.26    | 56.0    | 2923     |
| Speer 140 gr SP          | Reloder 22       | CCI 200 | Winchester | 3.26    | 56.5    | 2949     |
| Speer 150 gr SP          | Reloder 19       | CCI 200 | Winchester | 3.27    | 53.0    | 2745     |
| Speer 150 gr SP          | Reloder 22       | CCI 200 | Winchester | 3.27    | 54.0    | 2769     |
| Speer 150 gr BTSP        | Reloder 17       | Fed 210 | Federal    | 3.2     | 51.5    | 2921     |
| 270 WSM                  |                  |         |            |         |         |          |
| Speer 100 gr HP          | Reloder 15       | CCI 200 | Winchester | 2.73    | 62      | 3564     |
| Speer 100 gr HP          | Reloder 17       | Fed 215 | Federal    | 2.730   | 67.5    | 3668     |
| Speer 130 gr SP          | Reloder 19       | CCI 200 | Winchester | 2.7     | 66.0    | 3088     |
| Speer 130 gr SP          | Reloder 22       | CCI 200 | Winchester | 2.7     | 66.0    | 3228     |
| Speer 130 gr BTSP        | Reloder 17       | Fed 215 | Federal    | 2.7     | 62.0    | 3258     |
| Speer 140 gr SP          | Reloder 19       | CCI 200 | Winchester | 2.71    | 64.0    | 3088     |
| Speer 140 gr SP          | Reloder 22       | CCI 200 | Winchester | 2.71    | 65.0    | 3122     |
| Speer 140 gr SP          | Reloder 25       | CCI 200 | Winchester | 2.71    | 69.0    | 3179     |
| Speer 150 gr SP          | Reloder 19       | CCI 200 | Winchester | 2.67    | 60.0    | 2990     |
| Speer 150 gr SP          | Reloder 22       | CCI 200 | Winchester | 2.67    | 61.0    | 3009     |
| Speer 150 gr SP          | Reloder 25       | CCI 200 | Winchester | 2.67    | 64.0    | 3058     |
| Speer 150 gr BTSP        | Reloder 17       | Fed 215 | Federal    | 2.7     | 60.0    | 3041     |
| 270 Weatherby Magnum     |                  |         |            |         |         |          |
| Speer 100 gr HP          | Reloder 19       | Fed 215 | Federal    | 3.25    | 73.0    | 3570     |
| Speer 100 gr HP          | Reloder 22       | Fed 215 | Federal    | 3.25    | 76.0C   | 3627     |
| Speer 100 gr HP          | Reloder 25       | Fed 215 | Federal    | 3.25    | 77.0C   | 3478     |
| Speer 130 gr SP          | Reloder 19       | Fed 215 | Federal    | 3.25    | 65.0    | 3176     |
| Speer 130 gr SP          | Reloder 22       | Fed 215 | Federal    | 3.25    | 68.0    | 3214     |
| Speer 130 gr SP          | Reloder 25       | Fed 215 | Federal    | 3.25    | 72.0    | 3267     |
| Speer 150 gr SP          | Reloder 19       | Fed 215 | Federal    | 3.25    | 60.0    | 2903     |
| Speer 150 gr SP          | Reloder 22       | Fed 215 | Federal    | 3.25    | 63.0    | 2942     |
| Speer 150 gr SP          | Reloder 25       | Fed 215 | Federal    | 3.25    | 66.0    | 2966     |
| 264 Winchester Magnum    |                  |         |            |         |         |          |
| Speer 120 gr SP          | Reloder 19       | CCI 250 | Winchester | 3.3     | 59.0    | 3118     |
| Speer 120 gr SP          | Reloder 22       | CCI 250 | Winchester | 3.3     | 58.0    | 3140     |
| Speer 120 gr SP          | Reloder 25       | CCI 250 | Winchester | 3.3     | 63.0    | 3219     |
| Speer 140 gr SP          | Reloder 19       | CCI 250 | Winchester | 3.32    | 52.0    | 2822     |
| Speer 140 gr SP          | Reloder 22       | CCI 250 | Winchester | 3.32    | 53.0    | 2857     |
| Speer 140 gr SP          | Reloder 25       | CCI 250 | Winchester | 3.32    | 60.0    | 3005     |

Centerfire Rifle Load Data continued

| 7-30 Waters           |                  |         |            |         |         |          |
|-----------------------|------------------|---------|------------|---------|---------|----------|
| Caliber & Bullet      | Powder           | Primer  | Case       | Min OAL | Chg Wgt | Velocity |
|                       |                  |         |            |         | Grains  | fps      |
| Speer 110 gr HP       | Reloder 15       | CCI 200 | Federal    | 2.55    | 37.0    | 2757     |
| Speer 115 gr HP       | Reloder 15       | CCI 200 | Federal    | 2.55    | 35.0    | 2480     |
| 7-30 Waters continued |                  |         |            |         |         |          |
| Speer 130 gr SP       | Reloder 15       | CCI 200 | Federal    | 2.55    | 35.5    | 2609     |
| Speer 145 gr SP       | Reloder 15       | CCI 200 | Federal    | 2.55    | 35.0    | 2480     |
| 284 Winchester        |                  |         |            |         |         |          |
| Speer 110 gr HP       | Reloder 15       | CCI 200 | Winchester | 2.78    | 57.0    | 3384     |
| Speer 110 gr HP       | Reloder 19       | CCI 200 | Winchester | 2.78    | 62.0C   | 3159     |
| 7 MM Mauser           |                  |         |            |         |         |          |
| Speer 110 gr HP       | Power Pro 2000MR | Fed 210 | Federal    | 2.985   | 45.5    | 3010     |
| Speer 110 gr HP       | Reloder 15       | CCI 200 | Remington  | 2.985   | 48.0    | 3093     |
| Speer 115 gr HP       | Reloder 15       | CCI 200 | Remington  | 2.89    | 47.0    | 3024     |
| Speer 115 gr HP       | Reloder 19       | CCI 200 | Remington  | 2.89    | 54.0C   | 2879     |
| Speer 130 gr SP       | Reloder 15       | CCI 200 | Remington  | 2.8     | 45.0    | 2913     |
| Speer 130 gr SP       | Reloder 19       | CCI 200 | Remington  | 2.8     | 52.0C   | 2855     |
| Speer 130 gr SP       | Reloder 22       | CCI 200 | Remington  | 2.8     | 53.0C   | 2860     |
| Speer 130 gr BTSP     | Power Pro 2000MR | Fed 210 | Federal    | 2.8     | 43.3    | 2810     |
| Speer 140 gr SP       | Reloder 19       | CCI 200 | Remington  | 2.8     | 49.0C   | 2653     |
| Speer 145 gr SP       | Reloder 15       | CCI 200 | Remington  | 2.8     | 42.0    | 2598     |
| Speer 145 gr SP       | Reloder 19       | CCI 200 | Remington  | 2.8     | 52.0C   | 2795     |
| Speer 145 gr SP       | Reloder 22       | CCI 200 | Remington  | 2.8     | 51.0C   | 2684     |
| Speer 145 gr BTSP     | Power Pro 2000MR | Fed 210 | Federal    | 2.8     | 41.0    | 2610     |
| Speer 160 gr SP       | Reloder 19       | CCI 200 | Remington  | 3       | 49.0C   | 2570     |
| Speer 160 gr SP       | Reloder 22       | CCI 200 | Remington  | 3       | 49.0C   | 2514     |
| Speer 175 gr SP       | Reloder 15       | CCI 200 | Remington  | 3       | 38.0    | 2282     |
| Speer 175 gr SP       | Reloder 19       | CCI 200 | Remington  | 3.015   | 48.0C   | 2503     |
| Speer 175 gr SP       | Reloder 22       | CCI 200 | Remington  | 3.015   | 51.0C   | 2596     |
| 7 mm-08 Remington     |                  |         |            |         |         |          |
| Speer 110 gr HP       | Power Pro 2000MR | Fed 210 | Federal    | 2.76    | 48.0    | 3255     |
| Speer 110 gr HP       | Reloder 15       | CCI 200 | Remington  | 2.76    | 48.0    | 3238     |
| Speer 110 gr HP       | Reloder 17       | Fed 210 | Federal    | 2.76    | 50.5C   | 3169     |
| Speer 115 gr HP       | Reloder 15       | CCI 200 | Remington  | 2.655   | 46.0    | 3106     |
| Speer 115 gr HP       | Reloder 17       | Fed 210 | Federal    | 2.655   | 49.5C   | 3107     |
| Speer 130 gr SP       | Reloder 15       | CCI 200 | Remington  | 2.73    | 42.0    | 2786     |
| Speer 130 gr BTSP     | Power Pro 2000MR | Fed 210 | Federal    | 2.73    | 45.7    | 3030     |
| Speer 130 gr BTSP     | Reloder 17       | Fed 210 | Federal    | 2.73    | 48.5C   | 3007     |
| Speer 145 gr SP       | Reloder 15       | CCI 200 | Remington  | 2.73    | 41.0    | 2705     |



Centerfire Rifle Load Data continued

| 7 mm-08 Remington continued  |                  |         |            |         |         |          |
|------------------------------|------------------|---------|------------|---------|---------|----------|
| Caliber & Bullet             | Powder           | Primer  | Case       | Min OAL | Chg Wgt | Velocity |
|                              |                  |         |            |         | Grains  | fps      |
| Speer 145 gr BTSP            | Power Pro 2000MR | Fed 210 | Federal    | 2.73    | 43.3    | 2850     |
| Speer 145 gr BTSP            | Reloder 17       | Fed 210 | Federal    | 2.73    | 46.0    | 2819     |
| Speer 145 gr SP              | Reloder 19       | CCI 200 | Remington  | 2.73    | 51.0C   | 2933     |
| Speer 160 gr SP              | Reloder 15       | CCI 200 | Remington  | 2.8     | 38.0    | 2506     |
| Speer 160 gr SP              | Reloder 19       | CCI 200 | Remington  | 2.8     | 47.0C   | 2710     |
| Speer 160 gr BTSP            | Reloder 17       | Fed 210 | Federal    | 2.8     | 44.0    | 2669     |
| Hornady 162 gr A Max         | Power Pro 2000MR | Fed 210 | Federal    | 2.8     | 42.0    | 2710     |
| Speer 175 gr SP              | Reloder 15       | CCI 200 | Remington  | 2.745   | 36.0    | 2312     |
| Speer 175 gr GS              | Reloder 17       | Fed 210 | Federal    | 2.745   | 44.0    | 2574     |
| Speer 175 gr SP              | Reloder 19       | CCI 200 | Remington  | 2.745   | 47.0C   | 2628     |
| 280 Remington                |                  |         |            |         |         |          |
| Speer 110 gr HP              | Reloder 19       | CCI 200 | Remington  | 3.2     | 63.0C   | 3286     |
| Speer 110 gr HP              | Reloder 17       | Fed 210 | Federal    | 3.2     | 59.5    | 3397     |
| Speer 130 gr SP              | Reloder 15       | CCI 200 | Remington  | 3.205   | 47.0    | 2967     |
| Speer 130 gr SP              | Reloder 19       | CCI 200 | Remington  | 3.205   | 59.0    | 3134     |
| Speer 130 gr BTSP            | Reloder 17       | Fed 210 | Federal    | 3.205   | 56.0    | 3167     |
| Speer 140 gr SP              | Reloder 19       | CCI 200 | Remington  | 3.2     | 59.0C   | 2962     |
| Speer 145 gr SP              | Reloder 19       | CCI 200 | Remington  | 3.18    | 57.0    | 2973     |
| Speer 145 gr SP              | Reloder 22       | CCI 200 | Remington  | 3.18    | 58.0C   | 2880     |
| Speer 145 gr BTSP            | Power Pro 4000MR | Fed 215 | Federal    | 3.18    | 56.8    | 2990     |
| Speer 145 gr BTSP            | Reloder 17       | Fed 210 | Federal    | 3.18    | 53.0    | 2968     |
| Speer 160 gr SP              | Reloder 19       | CCI 200 | Remington  | 3.2     | 55.0    | 2813     |
| Speer 160 gr SP              | Reloder 22       | CCI 200 | Remington  | 3.2     | 56.0    | 2807     |
| Speer 160 gr BTSP            | Power Pro 4000MR | Fed 215 | Federal    | 3.18    | 54.5    | 2830     |
| Speer 160 gr BTSP            | Reloder 17       | Fed 210 | Federal    | 3.2     | 51.5    | 2825     |
| Speer 175 gr SP              | Power Pro 4000MR | Fed 215 | Federal    | 3.25    | 54.0    | 2690     |
| Speer 175 gr SP              | Reloder 19       | CCI 200 | Remington  | 3.33    | 52.0    | 2597     |
| Speer 175 gr SP              | Reloder 22       | CCI 200 | Remington  | 3.33    | 53.0    | 2616     |
| Speer 175 gr GS              | Reloder 17       | Fed 210 | Federal    | 3.265   | 50.5    | 2674     |
| 7 mm Winchester Short Magnum |                  |         |            |         |         |          |
| Speer 110 gr HP              | Reloder 15       | CCI 200 | Winchester | 2.8     | 59.0    | 3312     |
| Speer 110 gr HP              | Reloder 17       | Fed 215 | Winchester | 2.77    | 69.5    | 3588     |
| Speer 110 gr HP              | Reloder 19       | CCI 200 | Winchester | 2.8     | 72.0    | 3392     |
| Speer 130 gr SP              | Reloder 19       | CCI 200 | Winchester | 2.775   | 67.0    | 3230     |
| Speer 130 gr SP              | Reloder 22       | CCI 200 | Winchester | 2.775   | 68.0    | 3228     |
| Speer 130 gr BTSP            | Power Pro 4000MR | Fed 215 | Winchester | 2.775   | 70.0C   | 3335     |
| Speer 130 gr BTSP            | Reloder 17       | Fed 215 | Winchester | 2.775   | 66.5    | 3356     |

Centerfire Rifle Load Data continued

| 7 mm Winchester Short Magnum continued |                  |         |            |         |         |          |
|--|------------------|---------|------------|---------|---------|----------|
| Caliber & Bullet                       | Powder           | Primer  | Case       | Min OAL | Chg Wgt | Velocity |
|  |                  |         |            |         | Grains  | fps      |
| Speer 140 gr TBBC                      | Power Pro 4000MR | Fed 215 | Winchester | 2.8     | 67.9C   | 3190     |
| Speer 140 gr SP                        | Reloder 19       | CCI 200 | Winchester | 2.8     | 68.0    | 3134     |
| Speer 140 gr SP                        | Reloder 22       | CCI 200 | Winchester | 2.8     | 68.0    | 3132     |
| Speer 145 gr BTSP                      | Power Pro 4000MR | Fed 215 | Winchester | 2.78    | 67.7C   | 3165     |
| Speer 145 gr SP                        | Reloder 19       | CCI 200 | Winchester | 2.78    | 65.0    | 3063     |
| Speer 145 gr SP                        | Reloder 22       | CCI 200 | Winchester | 2.78    | 66.0    | 3079     |
| Speer 145 gr BTSP                      | Reloder 17       | Fed 215 | Winchester | 2.76    | 63.5    | 3166     |
| Speer 160 gr SP                        | Reloder 19       | CCI 200 | Winchester | 2.82    | 63.0    | 2956     |
| Speer 160 gr SP                        | Reloder 22       | CCI 200 | Winchester | 2.82    | 63.0    | 2936     |
| Speer 160 gr SP                        | Reloder 25       | CCI 200 | Winchester | 2.82    | 70.0    | 3090     |
| Speer 160 gr BTSP                      | Power Pro 4000MR | Fed 215 | Winchester | 2.82    | 66.0    | 2995     |
| Speer 160 gr BTSP                      | Reloder 17       | Fed 215 | Winchester | 2.82    | 60.0    | 2964     |
| 7 mm Remington Magnum                  |                  |         |            |         |         |          |
| Speer 110 gr HP                        | Reloder 15       | CCI 250 | Remington  | 3.2     | 58.0    | 3256     |
| Speer 110 gr HP                        | Reloder 17       | Fed 215 | Federal    | 3.2     | 68.0    | 3535     |
| Speer 110 gr HP                        | Reloder 19       | CCI 250 | Remington  | 3.2     | 74.0C   | 3489     |
| Speer 110 gr HP                        | Reloder 22       | CCI 250 | Remington  | 3.2     | 75.0C   | 3503     |
| Speer 130 gr SP                        | Reloder 15       | CCI 250 | Remington  | 3.285   | 55.0    | 3049     |
| Speer 130 gr SP                        | Reloder 19       | CCI 250 | Remington  | 3.285   | 69.0    | 3270     |
| Speer 130 gr SP                        | Reloder 22       | CCI 250 | Remington  | 3.285   | 70.0    | 3314     |
| Speer 130 gr BTSP                      | Reloder 17       | Fed 215 | Federal    | 3.2     | 63.5    | 3255     |
| Speer 140 gr SP                        | Reloder 19       | CCI 250 | Remington  | 3.28    | 67.0    | 3095     |
| Speer 140 gr SP                        | Reloder 22       | CCI 250 | Remington  | 3.28    | 66.0    | 3074     |
| Speer 140 gr SP                        | Reloder 25       | CCI 250 | Remington  | 3.28    | 71.5    | 3173     |
| Speer 145 gr SP                        | Reloder 19       | CCI 250 | Remington  | 3.28    | 67.0    | 3153     |
| Speer 145 gr SP                        | Reloder 22       | CCI 250 | Remington  | 3.28    | 68.0    | 3136     |
| Speer 145 gr BTSP                      | Power Pro 4000MR | Fed 215 | Federal    | 3.26    | 63.0    | 3055     |
| Speer 145 gr BTSP                      | Reloder 17       | Fed 215 | Federal    | 3.21    | 61.8    | 3113     |
| Speer 160 gr SP                        | Reloder 19       | CCI 250 | Remington  | 3.28    | 64.0    | 2941     |
| Speer 160 gr SP                        | Reloder 22       | CCI 250 | Remington  | 3.28    | 65.0    | 2976     |
| Speer 160 gr SP                        | Reloder 25       | CCI 250 | Remington  | 3.28    | 70.0    | 3012     |
| Speer 160 gr BTSP                      | Power Pro 4000MR | Fed 215 | Federal    | 3.26    | 60.0    | 2850     |
| Speer 160 gr BTSP                      | Reloder 17       | Fed 215 | Federal    | 3.21    | 59.0    | 2931     |
| Speer 175 gr SP                        | Power Pro 4000MR | Fed 215 | Federal    | 3.22    | 61.0    | 2780     |
| Speer 175 gr SP                        | Reloder 19       | CCI 250 | Remington  | 3.26    | 62.0    | 2812     |
| Speer 175 gr SP                        | Reloder 22       | CCI 250 | Remington  | 3.26    | 61.0    | 2830     |
| Speer 175 gr SP                        | Reloder 25       | CCI 250 | Remington  | 3.26    | 67.0    | 2888     |
| Speer 175 gr GS                        | Reloder 17       | Fed 215 | Federal    | 3.215   | 57.0    | 2774     |

Centerfire Rifle Load Data continued

| 7 mm Remington Ultra Magnum              |            |         |           |         |         |          |
|--|------------|---------|-----------|---------|---------|----------|
| Caliber & Bullet                         | Powder     | Primer  | Case      | Min OAL | Chg Wgt | Velocity |
|  |            |         |           |         | Grains  | fps      |
| Speer 145 gr SP                          | Reloder 19 | Fed 215 | Remington | 3.6     | 85.0    | 3200     |
| Speer 145 gr SP                          | Reloder 22 | Fed 215 | Remington | 3.6     | 88.0    | 3250     |
| Speer 145 gr SP                          | Reloder 25 | Fed 215 | Remington | 3.6     | 92.0    | 3251     |
| Speer 160 gr SP                          | Reloder 19 | Fed 215 | Remington | 3.6     | 85.0    | 3132     |
| Speer 160 gr SP                          | Reloder 22 | Fed 215 | Remington | 3.6     | 87.0    | 3177     |
| Speer 160 gr SP                          | Reloder 25 | Fed 215 | Remington | 3.6     | 91.0    | 3174     |
| Speer 175 gr SP                          | Reloder 22 | Fed 215 | Remington | 3.57    | 85.0    | 2974     |
| Speer 175 gr SP                          | Reloder 25 | Fed 215 | Remington | 3.57    | 90.0    | 3059     |
| 7 mm Remington Short Action Ultra Magnum |            |         |           |         |         |          |
| Speer 110 gr HP                          | Reloder 15 | CCI 200 | Remington | 2.68    | 59.0    | 3387     |
| Speer 110 gr HP                          | Reloder 19 | CCI 200 | Remington | 2.68    | 70.0C   | 3419     |
| Speer 130 gr SP                          | Reloder 15 | CCI 200 | Remington | 2.785   | 52.0    | 3085     |
| Speer 130 gr SP                          | Reloder 19 | CCI 200 | Remington | 2.785   | 65.0    | 3229     |
| Speer 130 gr SP                          | Reloder 22 | CCI 200 | Remington | 2.785   | 65.0    | 3214     |
| Speer 140 gr SP                          | Reloder 19 | CCI 200 | Remington | 2.84    | 63.0    | 3094     |
| Speer 140 gr SP                          | Reloder 22 | CCI 200 | Remington | 2.84    | 64.0    | 3117     |
| Speer 145 gr SP                          | Reloder 19 | CCI 200 | Remington | 2.785   | 62.0    | 3040     |
| Speer 145 gr SP                          | Reloder 22 | CCI 200 | Remington | 2.785   | 63.0    | 3061     |
| Speer 160 gr SP                          | Reloder 19 | CCI 200 | Remington | 2.8     | 60.0    | 2913     |
| Speer 160 gr SP                          | Reloder 22 | CCI 200 | Remington | 2.8     | 61.0    | 2930     |
| Speer 160 gr SP                          | Reloder 25 | CCI 200 | Remington | 2.8     | 66.0C   | 3024     |
| 7 mm Weatherby Magnum                    |            |         |           |         |         |          |
| Speer 110 gr HP                          | Reloder 15 | Fed 215 | Federal   | 3.26    | 63.0    | 3405     |
| Speer 110 gr HP                          | Reloder 19 | Fed 215 | Federal   | 3.26    | 74.0    | 3485     |
| Speer 110 gr HP                          | Reloder 22 | Fed 215 | Federal   | 3.26    | 76.0    | 3507     |
| Speer 130 gr SP                          | Reloder 15 | Fed 215 | Federal   | 3.33    | 60.0    | 3185     |
| Speer 130 gr SP                          | Reloder 19 | Fed 215 | Federal   | 3.33    | 72.0    | 3317     |
| Speer 130 gr SP                          | Reloder 22 | Fed 215 | Federal   | 3.33    | 74.0    | 3345     |
| Speer 145 gr SP                          | Reloder 15 | Fed 215 | Federal   | 3.35    | 56.0    | 2940     |
| Speer 145 gr SP                          | Reloder 19 | Fed 215 | Federal   | 3.35    | 69.0    | 3133     |
| Speer 145 gr SP                          | Reloder 22 | Fed 215 | Federal   | 3.35    | 71.0    | 3177     |
| Speer 160 gr SP                          | Reloder 19 | Fed 215 | Federal   | 3.35    | 68.5    | 3035     |
| Speer 160 gr SP                          | Reloder 22 | Fed 215 | Federal   | 3.35    | 70.0    | 3065     |
| Speer 160 gr SP                          | Reloder 25 | Fed 215 | Federal   | 3.35    | 75.0C   | 3132     |
| Speer 175 gr SP                          | Reloder 19 | Fed 215 | Federal   | 3.25    | 67.0    | 2885     |
| Speer 175 gr SP                          | Reloder 22 | Fed 215 | Federal   | 3.25    | 69.0    | 2904     |
| Speer 175 gr SP                          | Reloder 25 | Fed 215 | Federal   | 3.25    | 74.0C   | 2982     |

Centerfire Rifle Load Data continued

| 7 mm Shooting Times Westerner |                  |         |            |         |         |          |
|-------------------------------|------------------|---------|------------|---------|---------|----------|
| Caliber & Bullet              | Powder           | Primer  | Case       | Min OAL | Chg Wgt | Velocity |
|                               |                  |         |            |         | Grains  | fps      |
| Speer 145 gr SP               | Reloder 22       | CCI 250 | Remington  | 3.6     | 77.0    | 3273     |
| Speer 160 gr SP               | Reloder 22       | CCI 250 | Remington  | 3.6     | 73.0    | 3074     |
| Speer 160 gr SP               | Reloder 25       | CCI 250 | Remington  | 3.6     | 75.0    | 3076     |
| Speer 175 gr SP               | Reloder 22       | CCI 250 | Remington  | 3.6     | 70.0    | 2879     |
| Speer 175 gr SP               | Reloder 25       | CCI 250 | Remington  | 3.6     | 74.0    | 2947     |
| 30-30 Winchester              |                  |         |            |         |         |          |
| Speer 100 gr RNSP             | Reloder 7        | CCI 200 | Winchester | 2.345   | 35.0    | 2792     |
| Speer 110 gr HP               | Reloder 7        | CCI 200 | Winchester | 2.415   | 34.0    | 2708     |
| Speer 130 gr FNSP             | Reloder 7        | CCI 200 | Winchester | 2.55    | 31.0    | 2393     |
| Speer 130 gr FNSP             | Reloder 10X      | CCI 200 | Winchester | 2.55    | 30.5    | 2273     |
| Speer 130 gr FNSP             | Reloder 15       | CCI 200 | Winchester | 2.55    | 36.0C   | 2259     |
| Speer 150 gr FNSP             | Reloder 7        | CCI 200 | Winchester | 2.55    | 29.0    | 2188     |
| Speer 150 gr FNSP             | Reloder 10X      | CCI 200 | Winchester | 2.55    | 28.0    | 2117     |
| Speer 150 gr FNSP             | Reloder 15       | CCI 200 | Winchester | 2.55    | 34.0C   | 2170     |
| Speer 170 gr FNSP             | Reloder 10X      | CCI 200 | Winchester | 2.55    | 26.5    | 1972     |
| 300 Savage                    |                  |         |            |         |         |          |
| Speer 100 gr RNSP             | Reloder 7        | CCI 200 | Federal    | 2.475   | 40.0    | 3061     |
| Speer 110 gr SP               | Reloder 7        | CCI 200 | Federal    | 2.475   | 38.0    | 2811     |
| Speer 165 gr SP               | Reloder 15       | CCI 200 | Federal    | 2.55    | 44.0C   | 2614     |
| Speer 180 gr SP               | Reloder 15       | CCI 200 | Federal    | 2.55    | 43.0C   | 2469     |
| Speer 200 gr SP               | Reloder 15       | CCI 200 | Federal    | 2.55    | 42.0C   | 2379     |
| 308 Winchester                |                  |         |            |         |         |          |
| Speer 100 gr RNSP             | Reloder 7        | CCI 200 | IMI        | 2.36    | 41.0    | 3003     |
| Speer 110 gr HP               | Reloder 15       | CCI 200 | IMI        | 2.55    | 51.0C   | 3144     |
| Speer 125 gr HP               | Reloder 10X      | CCI 200 | IMI        | 2.615   | 42.0    | 3073     |
| Speer 125 gr HP               | Reloder 15       | CCI 200 | IMI        | 2.615   | 50.0C   | 3062     |
| Speer 130 gr HP               | Power Pro 2000MR | Fed 210 | Federal    | 2.8     | 53.0C   | 3095     |
| Speer 150 gr SP               | Reloder 10X      | CCI 200 | IMI        | 2.7     | 39.5    | 2755     |
| Speer 150 gr SP               | Reloder 15       | CCI 200 | IMI        | 2.7     | 49.0C   | 2919     |
| Speer 150 gr BTSP             | Power Pro 2000MR | Fed 210 | Federal    | 2.7     | 51.5C   | 2950     |
| Speer 150 gr BTSP             | Reloder 17       | Fed 210 | Federal    | 2.7     | 50.0C   | 2763     |
| Speer 150 gr TBBC             | Power Pro 2000MR | Fed 210 | Federal    | 2.8     | 52.0C   | 2950     |
| Federal 150 gr Fusion         | Power Pro 2000MR | Fed 210 | Federal    | 2.7     | 53.0C   | 3060     |
| Speer 165 gr SP               | Reloder 10X      | CCI 200 | IMI        | 2.8     | 38.0    | 2596     |
| Speer 165 gr SP               | Reloder 15       | CCI 200 | IMI        | 2.8     | 47.0C   | 2812     |
| Speer 165 gr BTSP             | Power Pro 2000MR | Fed 210 | Federal    | 2.8     | 50.0C   | 2840     |

Centerfire Rifle Load Data continued

| 308 Winchester continued                |                  |         |            |         |         |          |
|---|------------------|---------|------------|---------|---------|----------|
| Caliber & Bullet                        | Powder           | Primer  | Case       | Min OAL | Chg Wgt | Velocity |
|   |                  |         |            |         | Grains  | fps      |
| Speer 165 gr BTSP                       | Reloder 17       | Fed 210 | Federal    | 2.8     | 50.0C   | 2739     |
| Speer 165 gr TBBC                       | Power Pro 2000MR | Fed 210 | Federal    | 2.8     | 49.2C   | 2830     |
| Federal 165 gr Fusion                   | Power Pro 2000MR | Fed 210 | Federal    | 2.7     | 51.0C   | 2910     |
| Speer 168 gr BTHP                       | Reloder 15       | CCI 200 | IMI        | 2.8     | 45.0    | 2710     |
| Sierra 168 gr HPBT                      | Power Pro 2000MR | Fed 210 | Federal    | 2.8     | 48.5C   | 2775     |
| Sierra 175 gr HPBT                      | Power Pro 2000MR | Fed 210 | Federal    | 2.8     | 47.7C   | 2720     |
| Speer 180 gr SP                         | Reloder 15       | CCI 200 | IMI        | 2.8     | 45.0C   | 2613     |
| Speer 180 gr BTSP                       | Reloder 17       | Fed 210 | Federal    | 2.8     | 48.7C   | 2641     |
| Federal 180 gr Fusion                   | Power Pro 2000MR | Fed 210 | Federal    | 2.7     | 48.5C   | 2760     |
| Speer 200 gr SP                         | Reloder 15       | CCI 200 | IMI        | 2.8     | 42.0    | 2416     |
| 30-06 Springfield                       |                  |         |            |         |         |          |
| Speer 100 gr RNSP                       | Reloder 7        | CCI 200 | Winchester | 2.935   | 47.0    | 3188     |
| Speer 110 gr SP                         | Reloder 15       | CCI 200 | Winchester | 3       | 60.0C   | 3307     |
| Speer 150 gr SP                         | Reloder 15       | CCI 200 | Winchester | 3.25    | 52.0    | 2728     |
| Speer 150 gr SP                         | Reloder 19       | CCI 200 | Winchester | 3.25    | 62.0C   | 2722     |
| Speer 150 gr BTSP                       | Reloder 17       | Fed 210 | Federal    | 3.25    | 58.0    | 3006     |
| Speer 165 gr SP                         | Reloder 19       | CCI 200 | Winchester | 3.25    | 59.0C   | 2614     |
| Speer 165 gr SP                         | Reloder 22       | CCI 200 | Winchester | 3.25    | 62.0C   | 2725     |
| Speer 165 gr BTSP                       | Reloder 17       | Fed 210 | Federal    | 3.25    | 56.5    | 2874     |
| Speer 168 gr BTHP                       | Reloder 17       | Fed 210 | Federal    | 3.295   | 56.0    | 2850     |
| Speer 168 gr BTHP                       | Reloder 19       | CCI 200 | Winchester | 3.295   | 61.0C   | 2697     |
| Speer 180 gr SP                         | Reloder 19       | CCI 200 | Winchester | 3.16    | 59.0C   | 2640     |
| Speer 180 gr SP                         | Reloder 22       | CCI 200 | Winchester | 3.16    | 62.0C   | 2721     |
| Speer 180 gr BTHP                       | Reloder 17       | Fed 210 | Federal    | 3.25    | 54.5    | 2762     |
| Speer 200 gr SP                         | Reloder 15       | CCI 200 | Winchester | 3.295   | 47.0    | 2371     |
| Speer 200 gr SP                         | Reloder 17       | Fed 210 | Federal    | 3.25    | 51.0    | 2552     |
| Speer 200 gr SP                         | Reloder 19       | CCI 200 | Winchester | 3.295   | 55.0    | 2335     |
| Speer 200 gr SP                         | Reloder 22       | CCI 200 | Winchester | 3.295   | 58.0C   | 2499     |
| Speer 200 gr SP                         | Reloder 25       | CCI 200 | Winchester | 3.295   | 60.0C   | 2481     |
| 300 Remington Short Action Ultra Magnum |                  |         |            |         |         |          |
| Speer 110 gr SP                         | Reloder 15       | CCI 200 | Remington  | 2.656   | 65.0    | 3575     |
| Speer 130 gr HP                         | Power Pro 2000MR | Fed 210 | Remington  | 2.62    | 67.2    | 3460     |
| Speer 130 gr HP                         | Reloder 15       | CCI 200 | Remington  | 2.625   | 62.0    | 3350     |
| Speer 130 gr HP                         | Reloder 17       | Fed 210 | Federal    | 2.625   | 69.0C   | 3413     |
| Speer 150 gr BTSP                       | Power Pro 2000MR | Fed 210 | Remington  | 2.8     | 63.5    | 3230     |
| Speer 150 gr BTSP                       | Reloder 17       | Fed 210 | Federal    | 2.8     | 65.5    | 3268     |
| Speer 150 gr SP                         | Reloder 19       | CCI 200 | Remington  | 2.8     | 71.0C   | 3150     |

Centerfire Rifle Load Data continued

| 300 Remington Short Action Ultra Magnum continued |                  |         |            |         |         |          |
|---|------------------|---------|------------|---------|---------|----------|
| Caliber & Bullet                                  | Powder           | Primer  | Case       | Min OAL | Chg Wgt | Velocity |
|   |                  |         |            |         | Grains  | fps      |
| Federal 150 gr Fusion                             | Power Pro 2000MR | Fed 210 | Remington  | 2.7     | 64.0    | 3230     |
| Speer 165 gr BTSP                                 | Power Pro 2000MR | Fed 210 | Remington  | 2.8     | 61.5    | 3090     |
| Speer 165 gr BTSP                                 | Reloder 17       | Fed 210 | Federal    | 2.8     | 65.0    | 3152     |
| Speer 165 gr SP                                   | Reloder 19       | CCI 200 | Remington  | 2.8     | 61.5    | 2999     |
| Speer 165 gr SP                                   | Reloder 22       | CCI 200 | Remington  | 2.8     | 70.0C   | 3006     |
| Federal 165 gr Fusion                             | Power Pro 2000MR | Fed 210 | Remington  | 2.7     | 61.5    | 3050     |
| Speer 180 gr BTSP                                 | Reloder 17       | Fed 210 | Federal    | 2.8     | 63.0    | 3008     |
| Speer 180 gr SP                                   | Reloder 19       | CCI 200 | Remington  | 2.8     | 67.0C   | 2896     |
| Speer 180 gr SP                                   | Reloder 22       | CCI 200 | Remington  | 2.8     | 67.0C   | 2896     |
| Federal 180 gr Fusion                             | Power Pro 2000MR | Fed 210 | Remington  | 2.7     | 59.5    | 2910     |
| 300 Winchester Magnum                             |                  |         |            |         |         |          |
| Speer 100 gr RNSP                                 | Reloder 15       | CCI 250 | Winchester | 2.96    | 72.0    | 3604     |
| Speer 110 gr SP                                   | Reloder 15       | CCI 250 | Winchester | 3.215   | 71.0    | 3542     |
| Speer 110 gr SP                                   | Reloder 19       | CCI 250 | Winchester | 3.215   | 84.0    | 3574     |
| Speer 130 gr HP                                   | Reloder 15       | CCI 250 | Winchester | 3.26    | 67.0    | 3243     |
| Speer 150 gr SP                                   | Reloder 15       | CCI 250 | Winchester | 3.33    | 64.0    | 3058     |
| Speer 150 gr BTSP                                 | Reloder 17       | Fed 215 | Federal    | 3.33    | 74.0    | 3333     |
| Speer 150 gr SP                                   | Reloder 19       | CCI 250 | Winchester | 3.33    | 78.0C   | 3301     |
| Speer 150 gr SP                                   | Reloder 22       | CCI 250 | Winchester | 3.33    | 80.0C   | 3227     |
| Speer 165 gr SP                                   | Reloder 15       | CCI 250 | Winchester | 3.34    | 60.0    | 2809     |
| Speer 165 gr BTSP                                 | Reloder 17       | Fed 215 | Federal    | 3.34    | 72.5    | 3202     |
| Speer 165 gr SP                                   | Reloder 19       | CCI 250 | Winchester | 3.34    | 75.0    | 2997     |
| Speer 165 gr SP                                   | Reloder 22       | CCI 250 | Winchester | 3.34    | 77.0    | 3103     |
| Speer 168 gr BTHP                                 | Reloder 15       | CCI 250 | Winchester | 3.34    | 63.0    | 2911     |
| Speer 168 gr BTHP                                 | Reloder 17       | Fed 215 | Federal    | 3.34    | 72.5    | 3182     |
| Speer 168 gr BTHP                                 | Reloder 19       | CCI 250 | Winchester | 3.34    | 77.0    | 3138     |
| Speer 168 gr BTHP                                 | Reloder 22       | CCI 250 | Winchester | 3.34    | 79.0C   | 3190     |
| Speer 180 gr BTSP                                 | Power Pro 4000MR | Fed 215 | Federal    | 3.34    | 75.0C   | 3110     |
| Speer 180 gr BTSP                                 | Reloder 17       | Fed 215 | Federal    | 3.34    | 70.5    | 3074     |
| Speer 180 gr SP                                   | Reloder 19       | CCI 250 | Winchester | 3.34    | 76.0    | 3059     |
| Speer 180 gr SP                                   | Reloder 22       | CCI 250 | Winchester | 3.34    | 77.0C   | 3055     |
| Speer 180 gr SP                                   | Reloder 25       | CCI 250 | Winchester | 3.34    | 79.5C   | 3050     |
| Speer 200 gr SP                                   | Power Pro 4000MR | Fed 215 | Federal    | 3.34    | 70.0    | 2840     |
| Speer 200 gr SP                                   | Reloder 19       | CCI 250 | Winchester | 3.34    | 71.0    | 2761     |
| Speer 200 gr SP                                   | Reloder 22       | CCI 250 | Winchester | 3.34    | 73.0C   | 2852     |
| Speer 200 gr SP                                   | Reloder 25       | CCI 250 | Winchester | 3.34    | 75.0C   | 2857     |
| Speer 200 gr TBBC                                 | Power Pro 4000MR | Fed 215 | Federal    | 3.33    | 72.0    | 2880     |



Centerfire Rifle Load Data continued

| 300 Winchester Short Magnum |                  |         |            |         |                   |                 |
|-----------------------------|------------------|---------|------------|---------|-------------------|-----------------|
| Caliber & Bullet            | Powder           | Primer  | Case       | Min OAL | Chg Wgt<br>Grains | Velocity<br>fps |
| Speer 110 gr SP             | Reloder 15       | CCI 200 | Winchester | 2.75    | 69.0              | 3692            |
| Speer 130 gr HP             | Power Pro 2000MR | Fed 210 | Federal    | 2.8     | 66.3              | 3400            |
| Speer 130 gr HP             | Reloder 15       | CCI 200 | Winchester | 2.8     | 67.0              | 3459            |
| Speer 150 gr SP             | Reloder 19       | CCI 200 | Winchester | 2.81    | 73.5              | 3244            |
| Speer 150 gr BTSP           | Power Pro 2000MR | Fed 211 | Federal    | 2.81    | 64.0              | 3210            |
| Speer 150 gr BTSP           | Reloder 17       | Fed 215 | Federal    | 2.81    | 69.3              | 3343            |
| Speer 165 gr SP             | Reloder 19       | CCI 200 | Winchester | 2.81    | 73.0C             | 3135            |
| Speer 165 gr SP             | Reloder 22       | CCI 200 | Winchester | 2.81    | 73.0C             | 3126            |
| Speer 165 gr BTSP           | Reloder 17       | Fed 215 | Federal    | 2.81    | 68.0              | 3217            |
| Speer 180 gr SP             | Reloder 19       | CCI 200 | Winchester | 2.78    | 68.5C             | 2978            |
| Speer 180 gr SP             | Reloder 22       | CCI 200 | Winchester | 2.78    | 68.5C             | 2958            |
| Speer 180 gr BTSP           | Reloder 17       | Fed 215 | Federal    | 2.81    | 66.0              | 3082            |
| 300 H & H Magnum            |                  |         |            |         |                   |                 |
| Speer 110 gr SP             | Reloder 19       | CCI 250 | Winchester | 3.43    | 79.0              | 3538            |
| Speer 130 gr HP             | Reloder 19       | CCI 250 | Winchester | 3.44    | 75.0              | 3300            |
| Speer 150 gr SP             | Reloder 19       | CCI 250 | Winchester | 3.5     | 72.0              | 3223            |
| Speer 165 gr SP             | Reloder 19       | CCI 250 | Winchester | 3.5     | 67.0              | 3048            |
| Speer 180 gr SP             | Reloder 22       | CCI 250 | Winchester | 3.5     | 70.0              | 2996            |
| Speer 200 gr SP             | Reloder 22       | CCI 250 | Winchester | 3.5     | 65.0              | 2774            |
| 300 Weatherby Magnum        |                  |         |            |         |                   |                 |
| Speer 110 gr SP             | Reloder 19       | CCI 250 | Remington  | 3.335   | 90.0C             | 3722            |
| Speer 130 gr HP             | Reloder 19       | CCI 250 | Remington  | 3.53    | 86.0              | 3486            |
| Speer 150 gr SP             | Reloder 19       | CCI 250 | Remington  | 3.56    | 83.0              | 3282            |
| Speer 150 gr SP             | Reloder 22       | CCI 250 | Remington  | 3.56    | 86.0              | 3363            |
| Speer 165 gr SP             | Reloder 19       | CCI 250 | Remington  | 3.56    | 80.0              | 3155            |
| Speer 165 gr SP             | Reloder 22       | CCI 250 | Remington  | 3.56    | 83.0              | 3170            |
| Speer 165 gr SP             | Reloder 25       | CCI 250 | Remington  | 3.56    | 89.0C             | 3258            |
| Speer 180 gr SP             | Reloder 19       | CCI 250 | Remington  | 3.56    | 78.0              | 2990            |
| Speer 180 gr SP             | Reloder 22       | CCI 250 | Remington  | 3.56    | 82.0              | 3077            |
| Speer 180 gr SP             | Reloder 25       | CCI 250 | Remington  | 3.56    | 87.0              | 3109            |
| Speer 200 gr SP             | Reloder 19       | CCI 250 | Remington  | 3.56    | 77.0              | 2878            |
| Speer 200 gr SP             | Reloder 22       | CCI 250 | Remington  | 3.56    | 78.5              | 2881            |
| Speer 200 gr SP             | Reloder 25       | CCI 250 | Remington  | 3.56    | 85.0C             | 3022            |
| 300 Remington Ultra Magnum  |                  |         |            |         |                   |                 |
| Speer 150 gr BTSP           | Power Pro 4000MR | Fed 215 | Federal    | 3.495   | 90.0              | 3470            |
| Speer 150 gr SP             | Reloder 19       | Fed 215 | Federal    | 3.495   | 94.0              | 3401            |
| Speer 150 gr SP             | Reloder 22       | Fed 215 | Federal    | 3.495   | 97.0              | 3437            |

# NEW TECHNOLOGY. MAXIMUM VELOCITY.

Alliant Powder introduces Reloder 17, a smokeless powder that utilizes new technology to increase projectile velocity in most standard rifle calibers and the new short magnum cartridges.

- DENSITY DESIGNED FOR SHORT MAGNUM CASE CAPACITY
- BURN SPEED SIMILAR TO IMR-4350
- EXCELLENT PERFORMANCE ACROSS TEMPERATURE RANGES

The table below reveals the velocity gain over the nearest competitor for many popular calibers (this information was obtained using Edition 14 of the Speer Reloading Manual).

| CALIBER     | BULLET         | VELOCITY | GAIN |
|-------------|----------------|----------|------|
| 243 Win     | 85 gr HP       | 3316     | +48  |
| 243 WSM     | 70 gr HP       | 3745     | +198 |
| 243 WSM     | 85 gr BTSP     | 3452     | +178 |
| 6mm Rem     | 80 gr SP       | 3500     | +112 |
| 6mm Rem     | 85 gr BTSP     | 3441     | +156 |
| 270 Win     | 100 gr HP      | 3554     | +118 |
| 280 Rem     | 110 gr HP      | 3397     | +111 |
| 7mm WSM     | 110 gr HP      | 3588     | +163 |
| 7mm WSM     | 130 gr BTSP    | 3356     | +126 |
| 7mm WSM     | 145 gr BTSP    | 3166     | +87  |
| 30-06       | 150 gr BTSP    | 3006     | +159 |
| 300 WSM     | 150 gr BTSP    | 3343     | +74  |
| 300 WSM     | 180 gr BTSP    | 3082     | +10  |
| 300 Win Mag | 150 gr BTSP    | 3333     | +32  |
| 325 WSM     | 170 gr Semi-SP | 3131     | +57  |
| 325 WSM     | 200 gr SP      | 2897     | +60  |





Centerfire Rifle Load Data continued

| 300 Remington Ultra Magnum continued |                  |         |            |         |         |          |
|--------------------------------------|------------------|---------|------------|---------|---------|----------|
| Caliber & Bullet                     | Powder           | Primer  | Case       | Min OAL | Chg Wgt | Velocity |
|                                      |                  |         |            |         | Grains  | fps      |
| Speer 165 gr BTSP                    | Power Pro 4000MR | Fed 215 | Federal    | 3.6     | 89.0    | 3340     |
| Speer 165 gr SP                      | Reloder 19       | Fed 215 | Federal    | 3.6     | 91.0    | 3263     |
| Speer 165 gr SP                      | Reloder 22       | Fed 215 | Federal    | 3.6     | 93.0    | 3268     |
| Speer 165 gr SP                      | Reloder 25       | Fed 215 | Federal    | 3.6     | 97.0    | 3279     |
| Speer 180 gr BTSP                    | Power Pro 4000MR | Fed 215 | Federal    | 3.6     | 86.8    | 3180     |
| Speer 180 gr SP                      | Reloder 22       | Fed 215 | Federal    | 3.6     | 90.0    | 3118     |
| Speer 180 gr SP                      | Reloder 25       | Fed 215 | Federal    | 3.6     | 94.0    | 3146     |
| Speer 200 gr SP                      | Power Pro 4000MR | Fed 215 | Federal    | 3.6     | 81.4    | 2940     |
| Speer 200 gr SP                      | Reloder 22       | Fed 215 | Federal    | 3.6     | 86.0    | 2936     |
| Speer 200 gr SP                      | Reloder 25       | Fed 215 | Federal    | 3.6     | 88.0    | 2942     |
| 30-378 Weatherby                     |                  |         |            |         |         |          |
| Speer 150 gr SP                      | Reloder 19       | CCI 250 | Weatherby  | 3.6     | 105.0   | 3404     |
| Speer 165 gr SP                      | Reloder 19       | CCI 250 | Weatherby  | 3.6     | 103.0   | 3285     |
| 32-20 Winchester (Strong Action)     |                  |         |            |         |         |          |
| Speer 100 gr HP                      | Reloder 7        | CCI 400 | Winchester | 1.56    | 16.0    | 1634     |
| 7.62 X 39 mm                         |                  |         |            |         |         |          |
| Speer 123 gr SP                      | Reloder 7        | CCI 200 | IMI        | 2.15    | 27.0    | 2429     |
| 303 British                          |                  |         |            |         |         |          |
| Speer 123 gr SP                      | Reloder 10X      | Fed 210 | Federal    | 2.91    | 42.5    | 2964     |
| Speer 123 gr SP                      | Reloder 15       | Fed 210 | Federal    | 2.91    | 48.0C   | 2897     |
| Speer 150 gr SP                      | Reloder 10X      | Fed 210 | Federal    | 3.04    | 37.5    | 2606     |
| Speer 150 gr SP                      | Reloder 15       | Fed 210 | Federal    | 3.04    | 45.0    | 2746     |
| Speer 180 gr RNSP                    | Reloder 10X      | Fed 210 | Federal    | 3.075   | 34.5    | 2324     |
| Speer 180 gr RNSP                    | Reloder 15       | Fed 210 | Federal    | 3.075   | 42.0    | 2479     |
| 325 Winchester Short Magnum          |                  |         |            |         |         |          |
| Speer 150 gr SP                      | Reloder 15       | Fed 210 | Winchester | 2.85    | 65.0    | 3245     |
| Speer 150 gr S-SP                    | Reloder 17       | Fed 215 | Winchester | 2.85    | 71.5    | 3348     |
| Speer 170 gr SP                      | Reloder 15       | Fed 210 | Winchester | 2.79    | 62.0    | 3038     |
| Speer 170 gr S-SP                    | Reloder 17       | Fed 215 | Winchester | 2.79    | 65.0    | 3131     |
| Speer 170 gr SP                      | Reloder 19       | Fed 210 | Winchester | 2.79    | 74.0C   | 3064     |
| Speer 200 gr SP                      | Reloder 15       | Fed 210 | Winchester | 2.84    | 57.0    | 2742     |
| Speer 200 gr SP                      | Reloder 17       | Fed 215 | Winchester | 2.84    | 65.0    | 2897     |
| Speer 200 gr SP                      | Reloder 19       | Fed 210 | Winchester | 2.84    | 69.0    | 2837     |
| 8mm Mauser                           |                  |         |            |         |         |          |
| Speer 150 gr SP                      | Reloder 15       | CCI 200 | Remington  | 2.89    | 51.0    | 2726     |
| Speer 170 gr SP                      | Reloder 15       | CCI 200 | Remington  | 2.89    | 49.0    | 2632     |
| Speer 200 gr SP                      | Reloder 15       | CCI 200 | Remington  | 2.89    | 44.0    | 2267     |

Centerfire Rifle Load Data continued

| 338 Federal                |                  |         |            |         |         |          |
|----------------------------|------------------|---------|------------|---------|---------|----------|
| Caliber & Bullet           | Powder           | Primer  | Case       | Min OAL | Chg Wgt | Velocity |
|                            |                  |         |            |         | Grains  | fps      |
| Speer 200 gr SP            | Power Pro 2000MR | Fed 210 | Federal    | 2.82    | 52.0    | 2725     |
| Speer 200 gr SP            | Reloder 7        | Fed 210 | Federal    | 2.82    | 36.5    | 2403     |
| Speer 200 gr SP            | Reloder 10X      | Fed 210 | Federal    | 2.82    | 38.5    | 2444     |
| Speer 200 gr SP            | Reloder 15       | Fed 210 | Federal    | 2.82    | 46.0C   | 2598     |
| Federal 200 gr Fusion      | Power Pro 2000MR | Fed 210 | Federal    | 2.84    | 54.0C   | 2740     |
| Speer 225 gr SP            | Power Pro 2000MR | Fed 210 | Federal    | 2.82    | 49.5    | 2540     |
| Speer 225 gr BTSP          | Reloder 7        | Fed 210 | Federal    | 2.82    | 35.0    | 2256     |
| Speer 225 gr BTSP          | Reloder 10X      | Fed 210 | Federal    | 2.82    | 37.0    | 2299     |
| Speer 225 gr BTSP          | Reloder 15       | Fed 210 | Federal    | 2.82    | 44.0C   | 2440     |
| Federal 225 gr Fusion      | Power Pro 2000MR | Fed 210 | Federal    | 2.84    | 52.0C   | 2625     |
| 338 Winchester Magnum      |                  |         |            |         |         |          |
| Speer 200 gr SP            | Power Pro 2000MR | Fed 210 | Federal    | 3.3     | 63.2    | 2880     |
| Speer 200 gr SP            | Reloder 19       | CCI 250 | Winchester | 3.3     | 76.0C   | 2806     |
| Speer 200 gr SP            | Reloder 17       | Fed 215 | Federal    | 3.3     | 71.0    | 3002     |
| Speer 225 gr SP            | Power Pro 2000MR | Fed 210 | Federal    | 3.3     | 61.0    | 2715     |
| Speer 225 gr SP            | Reloder 19       | CCI 250 | Winchester | 3.3     | 78.0C   | 2944     |
| Speer 225 gr BTSP          | Reloder 17       | Fed 215 | Federal    | 3.34    | 67.5    | 2831     |
| Speer 250 gr GSP           | Reloder 17       | Fed 215 | Federal    | 3.3     | 66.0    | 2664     |
| Speer 250 gr SP            | Reloder 19       | CCI 250 | Winchester | 3.3     | 72.0C   | 2664     |
| Speer 250 gr SP            | Reloder 22       | CCI 250 | Winchester | 3.3     | 73.0C   | 2653     |
| 338 Remington Ultra Magnum |                  |         |            |         |         |          |
| Speer 200 gr SP            | Reloder 19       | Fed 215 | Federal    | 3.5     | 95.0    | 3216     |
| Speer 200 gr SP            | Reloder 22       | Fed 215 | Federal    | 3.5     | 98.0    | 3255     |
| Speer 200 gr SP            | Reloder 25       | Fed 215 | Federal    | 3.5     | 101.0C  | 3193     |
| Speer 225 gr SP            | Reloder 19       | Fed 215 | Federal    | 3.55    | 91.0    | 3028     |
| Speer 225 gr SP            | Reloder 22       | Fed 215 | Federal    | 3.55    | 93.0    | 3029     |
| Speer 250 gr SP            | Reloder 19       | Fed 215 | Federal    | 3.55    | 87.0    | 2849     |
| Speer 250 gr SP            | Reloder 22       | Fed 215 | Federal    | 3.55    | 91.0    | 2895     |
| Speer 250 gr SP            | Reloder 25       | Fed 215 | Federal    | 3.55    | 95.0    | 2915     |
| 340 Weatherby Magnum       |                  |         |            |         |         |          |
| Speer 200 gr SP            | Reloder 15       | Fed 215 | Federal    | 3.56    | 73.0    | 2973     |
| Speer 200 gr SP            | Reloder 19       | Fed 215 | Federal    | 3.56    | 87.0C   | 3032     |
| Speer 225 gr SP            | Reloder 15       | Fed 215 | Federal    | 3.61    | 70.0    | 2799     |
| Speer 225 gr SP            | Reloder 19       | Fed 215 | Federal    | 3.61    | 85.0C   | 2924     |
| Speer 225 gr SP            | Reloder 22       | Fed 215 | Federal    | 3.61    | 87.0C   | 2901     |
| Speer 250 gr SP            | Reloder 19       | Fed 215 | Federal    | 3.61    | 83.0    | 2788     |
| Speer 250 gr SP            | Reloder 22       | Fed 215 | Federal    | 3.61    | 85.0    | 2781     |

Centerfire Rifle Load Data continued

| 35 Remington         |             |         |            |         |         |          |
|----------------------|-------------|---------|------------|---------|---------|----------|
| Caliber & Bullet     | Powder      | Primer  | Case       | Min OAL | Chg Wgt | Velocity |
|                      |             |         |            |         | Grains  | fps      |
| Speer 158 gr UCHP    | Reloder 7   | CCI 200 | Winchester | 2.22    | 37.0    | 2357     |
| Speer 180 gr FNSP    | Reloder 7   | CCI 200 | Winchester | 2.47    | 30.0    | 1653     |
| Speer 220 gr FNSP    | Reloder 7   | CCI 200 | Winchester | 2.47    | 24.5    | 1936     |
| 35 Whelan            |             |         |            |         |         |          |
| Speer 158 gr UCHP    | Reloder 7   | CCI 200 | Remington  | 2.8     | 42.0    | 2193     |
| Speer 180 gr FNSP    | Reloder 15  | CCI 200 | Remington  | 3.03    | 60.0C   | 2678     |
| Speer 220 gr FNSP    | Reloder 15  | CCI 200 | Remington  | 3.23    | 60.0C   | 2599     |
| Speer 225 gr TBBC SP | Reloder 10X | CCI 200 | Remington  | 3.27    | 51.0    | 2603     |
| Speer 225 gr TBBC SP | Reloder 15  | CCI 200 | Remington  | 3.27    | 57.0C   | 2593     |
| Speer 250 gr SP      | Reloder 15  | CCI 200 | Remington  | 3.34    | 54.0    | 2284     |
| 350 Remington Magnum |             |         |            |         |         |          |
| Speer 158 gr UCHP    | Reloder 7   | CCI 200 | Remington  | 2.47    | 55.0    | 2901     |
| Speer 180 gr FNSP    | Reloder 7   | CCI 200 | Remington  | 2.8     | 51.0    | 2574     |
| Speer 220 gr FNSP    | Reloder 7   | CCI 200 | Remington  | 2.74    | 49.5    | 2426     |
| 375 H & H Magnum     |             |         |            |         |         |          |
| Speer 235 gr SP      | Reloder 15  | CCI 250 | Winchester | 3.6     | 78.0    | 2920     |
| Speer 250 gr TBBC SP | Reloder 15  | CCI 250 | Winchester | 3.58    | 76.0    | 2847     |
| Speer 270 gr BTSP    | Reloder 15  | CCI 250 | Winchester | 3.6     | 71.0    | 2675     |
| Speer 270 gr BTSP    | Reloder 19  | CCI 250 | Winchester | 3.6     | 83.0C   | 2589     |
| Speer 285 gr SP      | Reloder 15  | CCI 250 | Winchester | 3.56    | 69.0    | 2533     |
| Speer 285 gr SP      | Reloder 19  | CCI 250 | Winchester | 3.56    | 80.0C   | 2456     |
| Speer 300 gr TBBC SP | Reloder 15  | CCI 250 | Winchester | 3.6     | 70.0    | 2485     |
| 378 Weatherby Magnum |             |         |            |         |         |          |
| Speer 250 gr TBBC SP | Reloder 19  | CCI 250 | Weatherby  | 3.645   | 117.0   | 3227     |
| Speer 250 gr TBBC SP | Reloder 22  | CCI 250 | Weatherby  | 3.645   | 119.0   | 3223     |
| Speer 285 gr SP      | Reloder 19  | CCI 250 | Weatherby  | 3.635   | 111.0   | 2967     |
| Speer 285 gr SP      | Reloder 22  | CCI 250 | Weatherby  | 3.635   | 112.0   | 2971     |
| Speer 285 gr SP      | Reloder 25  | CCI 250 | Weatherby  | 3.635   | 117.0C  | 2974     |
| Speer 300 gr TBBC SP | Reloder 19  | CCI 250 | Weatherby  | 3.64    | 109.0   | 2829     |
| Speer 300 gr TBBC SP | Reloder 22  | CCI 250 | Weatherby  | 3.64    | 110.0   | 2827     |
| Speer 300 gr TBBC SP | Reloder 25  | CCI 250 | Weatherby  | 3.64    | 116.0C  | 2907     |
| 416 Remington Magnum |             |         |            |         |         |          |
| Speer 350 gr SP      | Reloder 15  | CCI 250 | Remington  | 3.58    | 85.0    | 2629     |
| Speer 400 gr TBBC SP | Reloder 15  | CCI 250 | Remington  | 3.55    | 79.0C   | 2380     |

Centerfire Rifle Load Data continued

| 416 Rigby                            |             |         |            |         |         |          |
|--------------------------------------|-------------|---------|------------|---------|---------|----------|
| Caliber & Bullet                     | Powder      | Primer  | Case       | Min OAL | Chg Wgt | Velocity |
|                                      |             |         |            |         | Grains  | fps      |
| Speer 350 gr SP                      | Reloder 19  | CCI 250 | Federal    | 3.36    | 105.0   | 2560     |
| Speer 400 gr TBBC SP                 | Reloder 19  | CCI 250 | Federal    | 3.6     | 103.0   | 2365     |
| Speer 400 gr TBBC SP                 | Reloder 22  | CCI 250 | Federal    | 3.6     | 101.0C  | 2311     |
| 444 Marlin                           |             |         |            |         |         |          |
| Speer 240 gr JHP                     | Reloder 7   | CCI 200 | Remington  | 2.53    | 50.0    | 2354     |
| Speer 240 gr JHP                     | Reloder 10X | CCI 200 | Remington  | 2.53    | 53.0    | 2348     |
| Speer 270 gr SP                      | Reloder 7   | CCI 200 | Remington  | 2.53    | 47.0    | 2216     |
| Speer 270 gr SP                      | Reloder 10X | CCI 200 | Remington  | 2.53    | 50.0    | 2212     |
| 45/70 Government (Trap Door Actions) |             |         |            |         |         |          |
| Speer 300 gr FNHP                    | Reloder 7   | CCI 200 | Winchester | 2.53    | 42.0    | 1775     |
| Speer 300 gr FNHP                    | Reloder 10X | CCI 200 | Winchester | 2.53    | 44.0    | 1679     |
| Speer 350 gr SP                      | Reloder 7   | CCI 200 | Winchester | 2.715   | 35.0    | 1458     |
| Speer 350 gr SP                      | Reloder 10X | CCI 200 | Winchester | 2.715   | 36.0    | 1481     |
| Speer 400 gr FNSP                    | Reloder 10X | CCI 200 | Winchester | 2.54    | 39.0    | 1464     |
| 45/70 Government (Lever Actions)     |             |         |            |         |         |          |
| Speer 300 gr FNHP                    | Reloder 7   | CCI 200 | Winchester | 2.53    | 47.0    | 2001     |
| Speer 300 gr FNHP                    | Reloder 10X | CCI 200 | Winchester | 2.53    | 52.0    | 1964     |
| Speer 400 gr FNSP                    | Reloder 10X | CCI 200 | Winchester | 2.54    | 44.0    | 1641     |
| 450 Marlin                           |             |         |            |         |         |          |
| Speer 300 gr FNHP                    | Reloder 7   | CCI 200 | Hornady    | 2.525   | 56.0C   | 2392     |
| Speer 400 gr FNSP                    | Reloder 7   | CCI 200 | Hornady    | 2.525   | 47.0    | 1963     |
| 458 Lott                             |             |         |            |         |         |          |
| Speer 350 gr SP                      | Reloder 7   | Fed 215 | Hornady    | 3.4     | 81.0    | 2699     |
| Speer 350 gr SP                      | Reloder 10X | Fed 215 | Hornady    | 3.4     | 84.0C   | 2712     |
| Speer 500 gr TBBC SP                 | Reloder 10X | Fed 215 | Hornady    | 3.6     | 67.0    | 2097     |
| Speer 500 gr TBBC SP                 | Reloder 15  | Fed 215 | Hornady    | 3.6     | 80.0C   | 2227     |
| 458 Winchester Magnum                |             |         |            |         |         |          |
| Speer 350 gr SP                      | Reloder 7   | CCI 250 | Winchester | 3.105   | 73.0C   | 2335     |
| Speer 400 gr FNSP                    | Reloder 7   | CCI 250 | Winchester | 3.125   | 74.0    | 2316     |
| Speer 500 gr TBBC SP                 | Reloder 7   | CCI 250 | Winchester | 3.3     | 62.0    | 1998     |
| Speer 500 gr TBBC SP                 | Reloder 10X | CCI 250 | Winchester | 3.3     | 65.0C   | 2039     |

EXTRA-LITE™ RELOADING DATA

| 12 Gauge 2 3/4 inch Remington STS, Nitro 27, Gun Club and Premier Plastic Shells |             |        |  |                    |                    |                    |                    |
|--|-------------|--------|--|--------------------|--------------------|--------------------|--------------------|
| Shot   | Primer      | Wad    | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                    |                    |                    |                    |
| (oz)   |             |        | 1100 fps   | 1150 fps           | 1200 fps           | 1250 fps           | 1300 fps           |
| 3/4  | Rem 209P    | CB0178 |  |                    |                    | 15.0 grs 6740 psi  | 16.0 grs 7490 psi  |
| 7/8  | Rem 209P    | TGT 12 |  | 14.5 grs 7210 psi  | 15.5 grs 8210 psi  | 16.2 grs 8970 psi  | 17.2 grs 9970 psi  |
| 7/8  | Rem 209P    | CB0178 |  | 15.0 grs 6580 psi  | 15.8 grs 7450 psi  | 16.8 grs 8430 psi  | 17.6 grs 9330 psi  |
| 7/8  | Win 209     | TGT 12 |  | 14.5 grs 7460 psi  | 15.5 grs 8700 psi  | 16.5 grs 9320 psi  | 17.5 grs 10180 psi |
| 7/8  | Fed 209A    | CB0178 |  |                    | 15.0 grs 8410 psi  | 15.9 grs 9540 psi  |                    |
| 7/8  | Cheddite    | CB0178 |  |                    | 15.4 grs 7900 psi  | 16.3 grs 9010 psi  | 17.2 grs 10240 psi |
| 7/8  | Rem 209P    | CB1100 |  | 14.2 grs 6280 psi  | 15.2 grs 7090 psi  | 16.2 grs 8390 psi  | 17.2 grs 10160 psi |
| 7/8  | Fio 616     | CB0178 |  |                    | 15.5 grs 6700 psi  |                    | 17.5 grs 9240 psi  |
| 7/8  | CCI 209     | TGT 12 |  |                    | 15.2 grs 8600 psi  |                    | 17.2 grs 10250 psi |
| 7/8  | CCI 209M    | TGT 12 |  |                    | 15.0 grs 8780 psi  |                    | 17.0 grs 10680 psi |
| 7/8  | Nobel Sport | CB0178 |  |                    |                    |                    | 17.8 grs 9850 psi  |
| 1  | Rem 209P    | CB4100 | 15.0 grs 7440 psi  | 15.7 grs 8470 psi  | 16.5 grs 9190 psi  |                    |                    |
| 1  | Rem 209P    | TGT 12 | 14.5 grs 8970 psi  | 15.5 grs 9600 psi  | 16.5 grs 10680 psi |                    |                    |
| 1  | Rem 209P    | CB1100 | 14.5 grs 7460 psi  | 15.5 grs 8660 psi  | 16.5 grs 9760 psi  |                    |                    |
| 1  | Win 209     | CB4100 | 14.9 grs 8060 psi  | 15.5 grs 8810 psi  | 16.3 grs 9800 psi  |                    |                    |
| 1  | Win 209     | TGT 12 | 14.5 grs 8770 psi  | 15.5 grs 10060 psi | 16.5 grs 10790 psi |                    |                    |
| 1  | Win 209     | CB1100 | 14.5 grs 8150 psi  | 15.5 grs 9000 psi  | 16.7 grs 10350 psi |                    |                    |
| 1  | Cheddite    | CB4100 | 14.5 grs 7676 psi  | 15.6 grs 8970 psi  | 16.5 grs 10400 psi |                    |                    |
| 1  | Cheddite    | TGT 12 | 14.5 grs 8930 psi  | 15.5 grs 10100 psi | 16.4 grs 10770 psi |                    |                    |
| 1  | Cheddite    | CB1100 | 14.5 grs 8020 psi  | 15.5 grs 8700 psi  | 16.5 grs 9940 psi  |                    |                    |
| 1  | Fed 209A    | CB4100 | 14.0 grs 8590 psi  | 15.0 grs 9200 psi  | 16.0 grs 10410 psi |                    |                    |
| 1  | Fed 209A    | TGT 12 | 14.0 grs 9810 psi  |                    |                    |                    |                    |
| 1  | Fed 209A    | CB1100 | 14.0 grs 9150 psi  | 15.0 grs 10210 psi |                    |                    |                    |
| 12 Gauge 2 3/4 inch Winchester AA-HS Plastic Shells                              |             |        |  |                    |                    |                    |                    |
| 3/4  | Win 209     | CB0178 |  |                    |                    | 15.0 grs 7220 psi  | 16.0 grs 8240 psi  |
| 7/8  | Win 209     | CB0178 |  | 14.5 grs 7410 psi  | 15.5 grs 8300 psi  | 16.5 grs 9070 psi  | 17.5 grs 9950 psi  |
| 7/8  | Win 209     | CB4100 |  | 14.8 grs 7330 psi  | 15.5 grs 7780 psi  | 16.5 grs 8990 psi  | 17.2 grs 9920 psi  |
| 7/8  | Fed 209A    | CB0178 |  |                    | 15.0 grs 8420 psi  | 16.0 grs 9800 psi  | 16.9 grs 10680 psi |
| 7/8  | Cheddite    | CB0178 |  | 14.4 grs 6970 psi  | 15.4 grs 7850 psi  | 16.4 grs 8650 psi  | 17.4 grs 9440 psi  |
| 7/8  | Win 209     | CB1100 |  | 14.2 grs 7140 psi  | 15.2 grs 8120 psi  | 16.3 grs 8430 psi  | 17.3 grs 9680 psi  |
| 7/8  | Fio 616     | CB0178 |  |                    | 15.5 grs 7950 psi  | 16.5 grs 8730 psi  | 17.5 grs 9700 psi  |
| 7/8  | CCI 209     | TGT 12 |  | 14.5 grs 7890 psi  | 15.5 grs 8740 psi  | 16.5 grs 9840 psi  | 17.5 grs 10440 psi |
| 7/8  | CCI-209M    | TGT 12 |  |                    | 15.2 grs 9190 psi  | 16.2 grs 10240 psi | 17.2 grs 10820 psi |
| 1  | Win 209     | CB4100 | 14.8 grs 8420 psi  | 15.8 grs 9440 psi  | 16.8 grs 10510 psi |                    |                    |
| 1  | Win 209     | TGT 12 | 14.7 grs 8690 psi  | 15.7 grs 9940 psi  | 16.5 grs 10660 psi |                    |                    |

Insert A

continued

| 12 Gauge 2 3/4 inch Winchester AA-HS Plastic Shells <small>continued</small> |          |        |  |                    |                    |                    |                    |
|--|----------|--------|--|--------------------|--------------------|--------------------|--------------------|
| Shot   | Primer   | Wad    | Charge Weight (grains) / Velocity (fps) & Pressure (psi) |                    |                    |                    |                    |
| (oz)   |          |        | 1100 fps   | 1150 fps           | 1200 fps           | 1250 fps           | 1300 fps           |
| 1  | Win 209  | CB1100 | 14.8 grs 8550 psi  | 15.9 grs 9050 psi  | 16.9 grs 10080 psi |                    |                    |
| 1  | Cheddite | CB4100 | 14.5 grs 8160 psi  | 15.5 grs 8910 psi  | 16.5 grs 10320 psi |                    |                    |
| 1  | Cheddite | TGT 12 | 14.7 grs 8930 psi  | 15.7 grs 9880 psi  | 16.3 grs 10870 psi |                    |                    |
| 1  | Cheddite | CB1100 | 14.6 grs 8590 psi  | 15.6 grs 9590 psi  | 16.6 grs 10380 psi |                    |                    |
| 1  | Fed 209A | CB4100 | 14.0 grs 8300 psi  | 15.0 grs 9480 psi  | 16.2 grs 10500 psi |                    |                    |
| 1  | Fed 209A | TGT 12 | 14.2 grs 9870 psi  | 15.1 grs 10460 psi |                    |                    |                    |
| 1  | Fed 209A | CB1100 | 14.2 grs 9300 psi  | 15.2 grs 10380 psi | 16.0 grs 10740 psi |                    |                    |
| 1  | Rem 209P | TGT 12 | 14.5 grs 8810 psi  | 15.5 grs 9900 psi  | 16.5 grs 10680 psi |                    |                    |
| 1  | Rem 209P | CB4100 | 14.5 grs 7770 psi  | 15.5 grs 8740 psi  | 16.5 grs 10060 psi |                    |                    |
| 12 Gauge 2 3/4 inch Federal® Gold Medal® Plastic Shells                      |          |        |  |                    |                    |                    |                    |
| 3/4  | Fed 209A | CB6100 |  |                    |                    |                    | 16.0 grs 6990 psi  |
| 7/8  | Fed 209A | CB6100 |  | 15.0 grs 6390 psi  | 15.8 grs 6650 psi  | 16.8 grs 7820 psi  | 17.6 grs 8710 psi  |
| 7/8  | Fed 209A | 12SO   |  | 15.0 grs 6750 psi  | 16.0 grs 7760 psi  | 17.0 grs 8910 psi  | 18.0 grs 10440 psi |
| 7/8  | Cheddite | CB6100 |  | 15.0 grs 5360 psi  | 16.0 grs 6180 psi  | 17.2 grs 7300 psi  | 18.2 grs 8610 psi  |
| 7/8  | Fio 616  | CB6100 |  |                    | 16.2 grs 6590 psi  |                    | 18.2 grs 7900 psi  |
| 7/8  | Win 209  | CB6100 |  |                    | 16.2 grs 7630 psi  |                    | 18.2 grs 9390 psi  |
| 7/8  | CCI 209M | CB6100 |  |                    | 16.3 grs 6820 psi  |                    | 18.2 grs 8520 psi  |
| 1  | Fed 209A | 12SO   |  | 16.0 grs 8730 psi  | 17.0 grs 9900 psi  |                    |                    |
| 1  | Fed 209A | CB6100 |  | 15.7 grs 8280 psi  | 16.7 grs 9350 psi  | 17.7 grs 10470 psi |                    |
| 1  | Cheddite | 12SO   |  | 16.2 grs 8300 psi  | 17.1 grs 9360 psi  | 18.1 grs 10250 psi |                    |
| 1  | Cheddite | CB6100 |  | 16.0 grs 7560 psi  | 17.4 grs 8490 psi  | 18.5 grs 9990 psi  |                    |
| 1  | Win 209  | 12SO   |  |                    | 17.3 grs 9700 psi  | 18.3 grs 10500 psi |                    |
| 12 Gauge 2 3/4 inch Federal® Gold Medal® Paper Shells                        |          |        |  |                    |                    |                    |                    |
| 7/8  | Fed 209A | CB6100 |  |                    | 15.4 grs 6640 psi  | 16.5 grs 7900 psi  | 17.4 grs 8890 psi  |
| 7/8  | Fed 209A | 12SO   |  |                    | 15.5 grs 7720 psi  | 16.5 grs 8680 psi  | 17.9 grs 10210 psi |
| 7/8  | Fio 616  | CB6100 |  |                    | 16.0 grs 5830 psi  | 17.0 grs 7040 psi  | 18.0 grs 7630 psi  |
| 7/8  | Win 209  | CB6100 |  |                    | 16.2 grs 6170 psi  | 17.3 grs 7310 psi  | 18.4 grs 8770 psi  |
| 7/8  | CCI 209  | CB6100 |  |                    | 16.2 grs 6760 psi  |                    | 18.2 grs 8070 psi  |
| 7/8  | CCI 209M | 12SO   |  |                    | 16.0 grs 7980 psi  |                    | 18.0 grs 9980 psi  |
| 1  | Fed 209A | 12SO   |  | 16.5 grs 8803 psi  | 17.5 grs 9860 psi  |                    |                    |
| 1  | Fed 209A | CB6100 |  | 16.4 grs 9060 psi  | 17.4 grs 10270 psi |                    |                    |
| 1  | Cheddite | 12SO   |  | 16.7 grs 8720 psi  | 17.7 grs 9540 psi  | 18.8 grs 10420 psi |                    |
| 1  | Cheddite | CB6100 |  | 16.5 grs 7410 psi  | 17.7 grs 8996 psi  | 18.8 grs 10040 psi |                    |
| 1  | Win 209  | CB6100 |  | 16.8 grs 7130 psi  | 17.5 grs 7551 psi  | 19.0 grs 9340 psi  |                    |

Insert B



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| OPTIMUM LOADS   |   |   |   |  |   |   |   |  |   |   |  |
| Light and Standard<br>12 ga. Target   | Light and Standard<br>12 ga. Target   | 12 ga. Standard<br>& Target   | 12 ga. Target   | Light and Standard<br>12 ga. Target  | Light and Standard<br>12 ga. Target   | 20 and 28 ga.<br>Target Loads   | .410 Shotshell  | Magnum Shotshell:<br>10, 12, 16, 20 & 28 ga.   | Non-Toxic Hunting<br>Shotshell  | Heavy Shotshell:<br>10, 12, 16, 20, & 28 ga.  | 7/8 oz. 12 ga. Target Loads  |
| SECONDARY LOADS   |   |   |   |  |   |   |   |  |   |   |  |
| Handgun   | None  | Handgun   | Cowboy Action Handgun   | None   | None  | None  | None  | Magnum Handgun   | None  | Heavy Handgun   | 1 oz. 12 ga. Target Loads  |
| REMARKS   |   |   |   |  |   |   |   |  |   |   |  |
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| OPTIMUM LOADS  |   |   |   |   |   |  |   |   |   |   |   |   |   |   |   |   |
| Magnum Handgun   | High Performance 9mm,<br>.40 S&W & 10mm   | .45 ACP<br>& Other Handgun  | Magnum Handgun  | Light Rifle   | Standard Varmint  | Light Varmint  | Medium Rifle  | Medium Rifle  | Medium Rifle Loads  | Long Range 12 ga.<br>Clay Target  | Standard Rifle  | Magnum Rifle Loads  | Magnum Rifle  | Heavy Magnum Rifle  | 50 Caliber Target   | Universal Shotshell<br>Powder, 12, 16, 20 & 28 ga.  |
| SECONDARY LOADS  |   |   |   |   |   |  |   |   |   |   |   |   |   |   |   |   |
| 22 Hornet  | Moderate Pistol   | .38 Special   | .22 Hornet & .218 Bee   | .45-70 Govt.  | Medium Rifle<br>Light Loads   | Bench rest calibers;<br>Light Bullet .308  | Heavy .223 Loads  | Silhouette Rifle  | Short Magnum Loads  | 12 ga. Hunting Loads  | Light Magnum Rifle  | Medium rifle<br>heavy bullet loads  | Heavy Bullet<br>Standard Rifle  | Magnum Rifle  | None  | Handgun   |
| REMARKS  |   |   |   |   |   |  |   |   |   |   |   |   |   |   |   |   |
| Maximum velocity and performance in magnum handguns  | Best choice for high performance 9mm, .40 S&W, and 10mm   | America's best pistol powder. Unsurpassed for .45 ACP target loads                              | Legendary for its performance in .44 Mag and other magnum pistol loads                      | Great in lightweight .223 varmint bullets   | Excellent performance in the standard varmint cartridges  | For light bullet applications in .222 Rem, .22-250 Rem and .223 Rem                                  | Excellent performance in heavy 223 and 308 loads  | Excellent in short action calibers, especially .308   | Similar burn speed to IMR 4350 with added velocity.   | Ideal for long range 12 ga. clay target shooting and backyard games like Annie Oakley, Protection and Buddy | Superb in .30-06 and .338 Win Mag   | Superior performance in the 7mm and 300 Win Mag cartridges  | Outstanding in 7mm Mag and .300 Win Mag applications  | Delivers High Energy for Weatherby Magnums and other large ridges                                   | Superior velocity, clean burning and a density created specifically for the 50 caliber application  | The world's most versatile reloading powder, now 50% cleaner burning                            |





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